

AMERICAN RAILROAD JOURNAL, AND ADVOCATE OF INTERNAL IMPROVEMENTS.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, NOVEMBER 22, 1834.

We are indebted to J. E. BLOOMFIELD, Esq., of Utica, for the interesting documents which appear in this number of the Journal.

This number of the Journal is devoted almost exclusively to the contemplated STEAM-BOAT or SHIP canals, from the navigable waters of the Illinois river to Chicago ; from Lake Erie to Ontario, around the Falls of Niagara ; and also from Lake Ontario, at Oswego, to Utica and the Hudson. It is a subject of great national importance, as well as of individual interest, and we therefore take great pleasure in thus laying it before the public.

The report of the Hon. C. F. MERCER, and the letters of Col. GRATIOT, and Gen. DUNCAN, will be found highly interesting, and, together with the field notes of the Engineer, which will be published in our next number, will, as we think, convince the most determined opponents of the work of its entire practicability, as well as of the importance of its early completion.

The report of NATHAN ROBERTS, Esq., of his survey of the route around Niagara Falls, contains precisely the information which the friends of the work have long desired, but which we have only recently received, together with a map of the same, both of which are soon to appear, and would some time since have been published, in pamphlet form, but for the absence from the city of the gentleman who undertook to prepare it for the press!

The reputation of Mr. Roberts as an Engineer will be a sufficient guarantee of the practicability of the work, and also of the approximate cost of a canal of the dimensions of which he speaks ; although of the dimensions, we presume, he would now entertain different views from those of 1826.

The more than realization, in the success of the Erie canal, of the most sanguine, and, as they were then termed, *visionary*, anticipations of its friends, must surely satisfy every intelligent man that we shall need, and *must have*, at no distant day, a free and easy communication for steamboats of the largest class between the Hudson and the Mississippi rivers ; we ought therefore to make this link of it of the required dimensions at once. The locks should certainly be equal in size to those now constructing on the St. Lawrence—200 by 55, and 10 feet deep.

We would call particular attention to the letter of J. E. B., page 728, in reply to a communication signed "Brindley," which appeared in the New-York American on the 7th of October last. "Brindley" crossed the Atlantic for authority to show the impracticability of the measure, when he might, with one-tenth of the trouble, have found much higher authority at home, showing its entire feasibility, and the importance of an early accomplishment of the work.

Brindley is not the first, nor the only, American, who forgets that his own countrymen have merits as well as others. We would by no means detract a particle from the merit to which foreigners are entitled, nor would we withhold from our own countrymen that praise to which many of them are so justly entitled. With regard to the objection on account of a want of water on the summit, we have received a letter assuring us that an examination has been made which puts that question at rest. The supply, it is said, will be ample.

At the Meeting held on Friday evening at the Common Council Room the following resolution was adopted, in reference to the contemplated convention respecting the Rail road.

Resolved, That a committee of twelve persons be appointed whose duty it shall be to attend such meeting or convention as may be appointed in connex-

ion with our fellow citizens in other parts of the country to consult upon our common interests in relation to the route of a Railroad across the peninsula of Michigan, and to report the result of such consultation to a future meeting of the citizens of Detroit.

The following gentlemen were appointed said committee. Hon. J. Biddle, Col. Andrew Mack, General J. R. Williams, Col. Levi Cook, Colonel Henry Whiting, B. F. H. Withersell, E. Farmworth, E. Gray, J. Norval, O. Newberris, S. T. Mason, E. C. Matthews.—[Detroit Courier.]

The New Orleans papers are seriously discussing the subject of a railroad from that city to Nashville. The length of the road is estimated at 500 miles, and it is contended that it may be easily made with the united funds of New Orleans and the States of Mississippi and Tennessee. The distance by water, from New Orleans to Nashville, is twelve days ; by the railroad it would be only two and a half days.

The people of Fredericksburg and its vicinity, at a public meeting held last week, adopted the following among other resolutions :

1st. *Resolved*, That the scheme of a railroad from Fredericksburg to Guyandotte, or some other point on the western waters, is feasible and may be carried into effect, advantageously to the stockholders and to the community.

2d. *Resolved*, That a committee of three be appointed, to draft a memorial to the next Legislature of Virginia, for an act of incorporation.

Rail Roads.—It is stated in a late Pensacola Gazette, that a survey of the route for a Rail Road between that place and Columbus, has been made ; and that the Engineer reports the distance 220 miles,—straight and level beyond expectation.

We mentioned some days since that the People's Line of Railroad Cars and Stages had been established to run between this City and Pittsburgh in 60 hours. The first trip has been made and was run in 57 hours.—[Connecticut Herald.]

From the 21st to the 31st of October, the tolls on the Erie Canal amounted to \$75,648.26. The tolls collected upon all the Canals in this State for October, amount to \$240,000.

Sixty-one canal boats passed Huntingdon, Pa., during the week ending 3d inst. Fifteen hundred and eighty-four have passed that place during the present season.

A project is now in preparation at Liverpool for establishing a steam communication with India, by the way of the Mediterranean. It is to consist of two flat bottomed steamers, manufactured of iron, which, with their engines, will be transported in a vessel to the coast of Syria, to be there landed, and conveyed by camels to the Euphrates, and then put together. The expedition will be under the direction of Captain Chesney, of the Royal Artillery, having under him an officer and twenty artillery men, and also a lieutenant of the Royal Navy, with two mates, engineers, &c.

MICHIGAN AND ILLINOIS SHIP CANAL.

December 30, 1833.

To the Hon. CHAS. F. MERCER,

Chairman of the Committee on Roads and Canals.

SIR: Allow me most respectfully to call your attention, and that of the committee of which you are chairman, to the proposition submitted by me on the 17th day of December, 1833, authorizing "an inquiry into the expediency of a grant by Congress of efficient aid to the State of Illinois, to enable her to construct a steamboat channel from Lake Michigan to the Mississippi river."

It can scarcely be necessary for me to urge the importance of an early completion of this great work to every portion of this Union, connecting, as it would, more than twenty States.

By this small improvement we should secure the most extensive internal steamboat navigation that now is, or perhaps ever will be, known, penetrating, for more than twenty-five thousand miles, the most fertile regions of country on the globe; capable of supplying every part of christendom with every thing necessary to make man independent and happy; and on whose lakes and rivers are seen in increasing numbers the whitening sail and torrent-stemming boat.

Through this channel the sugar, cotton, rice, and tobacco of the South, the lead, coal, bread-stuffs, pork, beef, and other products of the West, would pass to the North, exchanged for their salt and timber, manufactures and merchandise.

It is now estimated that there are about 315 steamboats on the Western waters, and about 350 schooners, smaller vessels, and steamboats on the lakes, the increase of which can scarcely be anticipated, when we see that the steamboats have increased from one in 1814 to 315 in 1833, less than twenty years, and the vessels, &c. on the lakes have increased almost as fast.

The commerce carried on on the Western waters was estimated this year at one million seven hundred thousand tons, which is said to have been worth about one hundred and seventy millions of dollars; freights have been reduced from five dollars to thirty-seven and a half cents per hundred from New-Orleans to Louisville; passages and other charges have fallen in the same ratio; the amount and value of the commerce on the lakes can scarcely be estimated, except by the number of vessels engaged in carrying it on; and the unequalled growth and improvement of the whole lake country. It seems to me that national pride, as well as national interest, should press on the accomplishment of this great work.

Of its practicability there can be no doubt, unless the observations of more than one skilful engineer have been deceptive; and it is the shortest and best, if not the only route for the union, by such a channel of these vast navigable waters.

There is a reason for the immediate action of Congress on this interesting subject, which I will respectfully suggest. A portion of the country on the contemplated route of this canal, and on both sides of the Illinois river, is rapidly settling; an extensive commerce is now carried on with New-York, Philadelphia, and Canada, from Chicago, on Lake Michigan, and through the Illinois river, to New-Orleans, and all the West, which is pressing the State for an immediate construction of this work; and I am confident that the next Legislature of Illinois will commence a work of some kind to connect these waters; and, if left to do so with the limited means now at her command, cannot project and finish a communication corresponding with the national utility of the position. Several routes for this canal have been thought of:

First. The route as at present designated, which has been surveyed and thoroughly examined, and is known to be practicable.

Second. The bed of the Des Plaines river.

Third. To enter the Kankakee from fifty to seventy-five miles above the rapids of the Illinois, as it is said to be navigable for that dis-

tance, making a canal round the rapids, and to the lake.

The last route, it is thought by some with whom I have conversed, would greatly diminish the expense of the work; and though the distance might be increased, that forms no great objection if steamboats could be used: these, however, will be points hereafter to be settled by the State of Illinois. According to my judgment, there are two ways of affording such assistance as would induce the State to begin and finish a canal of the largest size.

The first would be for Congress to grant the reserved alternate sections of land on the route of the canal, and extend the grant on both sides of the Illinois river, from the canal to its junction with the Mississippi, with the right to select other lands in lieu of such as have been sold by the United States, or which may be unfit for cultivation. With such aid, I have no hesitation in expressing the opinion that the State will immediately commence and very soon complete the work.

By using the lake as a feeder, a sufficient quantity of water can be thrown into the Illinois river so as to secure the passage of steamboats of the largest size at all seasons of the year.

The reason for extending the grant along the river is, that the State may thereby be enabled to improve its channel and banks. The Illinois is one of the most beautiful rivers of the West, and during most of the year is navigable for the largest steamboats; yet in very low water there are several shoals or bars, and obstructions by sunk timber, which should be removed. The current of this river is so slight, that it is in fact a natural canal; and, by improving one or both banks, so as to make tow-paths, would be so used.

I am aware that it may be supposed I am asking too much, and it may be said that the State has not yet expended the original grant. To such I can only say that parsimony in this case, as in all others of like kind, will be a fatal error.

The proposed grants, if made, would of course be on condition that the canal should be as large as I have suggested; and if they be not made, it is perfectly certain that the State will not be able to construct this, or even an ordinary canal, without embarrassing her resources, or contracting a heavy debt, which might, under all the circumstances, be considered doubtful policy, and which the Legislature of the State have heretofore refused to adopt. As the citizens of that country are anxious for some communication between the lakes and the Mississippi, it is much to be feared that the Legislature may authorize the construction of a railroad, which, however valuable, would fall far short, in its utility, of the just expectations of the people, and, in point of national advantages and importance, would bear no comparison with a canal of any kind, but especially such a one as I have suggested.

With you, sir, I need not argue to prove that this is the most important national improvement now to be made in this country; and the time has now arrived when Congress has it in its power to decide whether this link in the vast extent of inland navigation shall be on a liberal or on a contracted scale—shall be made promptly or at some distant day.

I cannot permit myself to doubt the decision, especially when I well know that a large portion of the very land which is asked for, unless a canal be made, will remain for many years, as millions of acres now are, valueless and unsaleable, on the hands of the Government, and that the sound policy in relation to the value and sale of the immense districts of land owned by the United States almost exclusively, through which the canal would pass, would be to make the grant.

I do not doubt that the whole grant, nay, three times the amount, would, on the completion of the work, be immediately reimbursed by the increased value and ready sale of the adjacent lands, a large portion of which, from their remoteness from highways and other

causes, are now nearly, if not altogether, without value.

The other mode of accomplishing this work would be for Congress to construct it on their own plan, out of the treasure of the nation, and then cede it to the State on the same principles as were contained in the cession of the Cumberland road to Ohio, Pennsylvania, and Virginia, which, I have no doubt, would be acceptable to Illinois, and may be made out of the public treasury with the same propriety that the national road has been made, under the agreement with Virginia that one or more highways should be made from the Northwest Territory to the Atlantic.

These suggestions are made with a view to secure the early accomplishment of this great national work, and on a scale worthy of a great and enterprising people, which, if finished, will, in a single season, and especially in case of a maritime war, more than pay for the cost of its construction to several States in the Union, by the certainty and increased facilities afforded to their commerce.

Among the objections which I have to a railroad, especially at this point, are the following:

The transportation would fall into the hands of a few monopolists. The cost, risk, and delay of transshipment, would be great; and many, if not most, of the articles raised in the country would not bear transportation on a railroad, while all would upon a canal.

If a canal should be made, such as I have spoken of, every man who did not desire to put his material into a steamboat, could use his own craft, his own means, and his own time; could go to market and return with little or no expense; while the citizens of other States, engaged in carrying on a trade, could pass from New Orleans directly into Lake Michigan, without the expense of a transshipment or a moment's delay; and the difference in utility, between a canal and railroad, is not more striking to my mind than that of their comparative durability and value. Experience has shown that railroads grow worse with use, require repairing from the moment they are made, and last but about fifteen years; while canals improve every day, and last forever.

I will not consume your time by showing the perfect practicability of constructing this canal, and at comparatively small cost; but will refer you to the several surveys and reports of engineers, made under the authority of the State of Illinois and of the United States, which leave no doubt upon that subject.

With great respect, your obedient servant,
JOSEPH DUNCAN.

In the House of Representatives of the U. S., June 25th, 1834, Mr. MERCER, from the Committee on Roads and Canals, to which the subject had been referred, made the following

REPORT:

The Committee on Roads and Canals, to which was referred the resolution of the House of Representatives, instructing them to inquire into the expediency of affording some efficient aid to the State of Illinois, in the construction of a steamboat canal from Michigan to Illinois river, report:

That they have given to the subject of this resolution all the consideration compatible with a due regard to the numerous topics of inquiry referred to them by the House. The public attention has long been attracted, by Darby and other geographers, to the facility as well as the importance of connecting, by a line of uninterrupted navigation, the Northwestern lakes with the Upper Mississippi. Two modes of accomplishing this desirable purpose have been especially regarded: one, by Green Bay and the Fox and Wisconsin rivers; the other, by means of Chicago creek and the river Illinois.

Of these routes, the latter possesses a decided advantage over the former, apart from the present condition of the population and improvements of the country to be immediately bene-

fitted by opening such a communication, and the whole of this route is comprehended within the jurisdiction of a single State, one of the largest in territorial extent, and destined, by the fertility of its soil, to be one of the largest, in point of numbers, of the Union. The United States, as the actual proprietor and concurrent sovereign of the national domain adjacent to the lakes, manifested an interest in this route, by an act of Congress of the 30th of March, 1822; which authorized the State of Illinois to open a canal through the public lands, to connect the Illinois river with Lake Michigan. This act empowered the State of Illinois to "survey and mark the route" of such a canal, and, reserving from future sale, vested in that State ninety feet of land on each side of such route as might be approved for that object. A condition was annexed to this grant, that it should become void, provided that the State of Illinois did not survey and return to the Treasury Department a map of the canal within three years from the date of the grant; or, if the canal should not be completed "and suitable for navigation," within twelve years from the passing of the act.

Believing that the contemplated canal would advance the price of the lands in its vicinity, this act "reserved from future sale, till otherwise ordered," every section of the public land "through which the canal route might pass."

By a subsequent act, bearing date the 27th of March, 1827, Congress granted to the State of Illinois, to aid in the construction of this canal, "a quantity of land, equal to one-half of five sections in width," on each side of the route thereof, "reserving each alternate section to the United States;" and subjected the land, so granted, to the disposal of the Legislature of Illinois, under several conditions: among which was, that the canal should be commenced within five years, and completed in twenty years, or the State should pay to the United States the proceeds of sale of any of the granted lands which she might have sold. By an act of the 2d of March, 1833, amendatory of the last, the State of Illinois is authorized to dispose of the lands before granted, for the purpose of making a railroad, instead of a canal, should such be the pleasure of that State, and the time for commencing and completing the canal, or its substitute, the railroad, is extended for five years, under all the obligations of the antecedent acts of Congress, neither of which is expressly repealed.

As the resolution of the House of Representatives, which gives rise to this report, limits its inquiry to the expediency of constructing a steamboat canal, the committee are called upon to consider the relative advantages of such a canal, compared with the railway, which the State of Illinois has been authorized to make in lieu of it.

Of the part of the communication from Fort Mackinac, near the head of Lake Michigan, to New Orleans, in length more than two thousand miles, to say nothing of the vast extent of the steamboat navigation connected with that lake and the various rivers of the Mississippi, the whole is adapted to the use of steamboats of a large class, except the portion between the contemplated harbor of Chicago, at the bottom of Lake Michigan, and the navigable waters of the river Illinois, a distance of ninety-two miles.

Fortunately, as has been said, this obstruction is entirely within the limits of a single State, in fixing whose extended boundaries a former Congress is believed to have had reference to one of the most striking features in the topography of the United States; that, at high water, an imperfect but continuous navigation has always been known to subsist between the river Illinois and the lower extremity of Michigan. On the wisdom and enterprise of the largest western State of the Union, therefore, the efforts to effect a permanent union of the upper lakes with the Lower Mississippi and the mouth of the Missouri will hereafter rest; and the first question which that flourishing

commonwealth will be called upon to decide, in fulfilling the national trust thus confided to her, is, by what means shall this union be accomplished? Shall it be by a uniform line of water transit, admitting the delivery of the produce of the lake shores at the ports of the Mississippi from the vessel which first receives them; or shall this produce, of every description, be transferred, by the interposition of a railway, more than 90 miles long, from the lake vessel to the road car, and thence back again to the river boat?

This question, of necessity, involves an inquiry, which would be the cheaper line of transit from Lake Michigan to the highest steamboat navigation of the Illinois river, making due allowance for the expense of transportation; and not that alone, but the cost of storage and of commissions on two translations of the cargo, and its unavoidable exposure to deterioration, hazard, and waste. With regard to certain commodities, such as coal, lime, and lumber, the weight of which is very great in proportion to their value, as well as several manufactures of an opposite description, such as of china, glass, and furniture, liable to breakage from frequent and rough handling, these transshipments merit serious consideration. Bituminous coal, of soft texture, however excellent as fuel, loses, it is known, much of its value by being shovelled and thrown from one vessel into another: and boards are often split in the usual mode of transshipping them. Other commodities are liable to injury from being wet, as salt, sugar, and dry goods; and especially, if transported considerable distances after being so. Lime, from such exposure, would be involved, with its accompanying cargo, in yet more serious danger; and would extend that danger to the vessel or carriage which contained it. The weight of some of those commodities is, moreover, liable to be much increased by moisture, a circumstance calculated to effect directly the cost of their transportation. But setting aside all these minute but important details of actual experience, does a rational doubt any longer obscure the question, whether canals, and especially such a canal as is here contemplated, will afford a cheaper line of transit than a railroad, for the distance between Chicago and the head of steamboat navigation on the Illinois river, however perfect its construction? It is believed not.

A prejudice of natural origin pervaded all the first inquiries on this subject. The imagination was led captive by the flying motion of a railroad car, impelled by one of the most powerful agents hitherto discovered by the ingenuity and subject to the control of man. And no one, not insensible to the peculiar character of the political institutions of the United States, who beholds the vast and yet growing extent of the territory which they hold in union, can be insensible of the value of railroads. They are calculated, by the rapid motion which they admit upon their smooth and even surface, to impart to every State many of the advantages of a narrow territory, without subducing from the numbers or wealth of its inhabitants. This advantage, however, so far as its political effect should be regarded, is most important in relation to the transit between the seat of the General Government, and that of each of the several States, and between the capitals of those States—an advantage of incalculable value in a period of public danger.

For the mere transit of commodities, for purposes of commerce only, and especially of that commerce which transfers the heavy agricultural or mineral productions of the interior of the United States from place to place, celerity of motion is far less important than economy or cheapness.

For many of these commodities will not bear a heavy charge upon their transportation; and the most valuable, if imperishable in character, gain no more, by an earlier arrival at market, than the interest on the sum which their sale

produces, during the time that would be lost by their slower transit. The mere interest, for a few weeks, days, or hours, on the price of a cargo of coal, that commodity which, more than any other, has contributed to swell the revenue of the most productive canals—or upon a cargo of lumber, of lime, or of iron ore, commodities of similar importance in canal navigation—would pay but a very small, scarcely a nominal advance on the freight of any one of those bulky commodities. And yet, a few hours only, certainly less than a single day, would be saved in a distance of ninety miles, by substituting a railroad for a canal between the navigable waters of the Illinois and the harbor of Chicago.

A much greater difference, it is believed, would be found to arise in favor of a water transit, when compared with that by a railroad, from the superior economy of the former.

The opinion, that, in their construction, canals cost more than railroads, notwithstanding the authority of certain English writers, as Wood and Tredgold, has been exploded in America by experience, the best test of truth, in relation to all matters of practical economy. Those writers, aware that the efficiency of a given moving power upon a well constructed canal, at low velocities, is at least three times as great as on a perfectly level railroad, to balance this advantage of the former over the latter, estimated the cost of a canal at thrice that of a railroad.

It is remarkable that, while these authorities continue to be read and quoted, to subserve the same purpose in America as in Great Britain, the Liverpool and Manchester railroad remains the only instance of the application of this mode of commercial intercommunication or exchange, between any of the great cities of that populous, rich, and flourishing island. Except the Stockton and Darlington railroad, employed almost exclusively in the transportation of coal, this road is also the only one in Great Britain the stock of which is above par; and this, too, in a money market, in which the legal rate of interest does not at any time exceed four per cent. per annum.

The length of this railroad is very little more than thirty miles; its cost, with its appurtenances, it is seen by the last semi-annual report of the Liverpool and Manchester Railroad Company, exceeds a million of pounds sterling; and the price of carriage upon it for merchandise is 10s. 3d. sterling per ton; for each passenger 4s. 7d. sterling, for the distance of thirty miles. The outlay of the company, in effecting this transportation, has not, in a series of years, been, at any time, less than 7s. 6d. sterling for each ton of merchandise, and 2s. 0d. sterling for each passenger. As this outlay of the company comprehends no charge whatever for its large expenditure, it is an item which, in measuring the relative economy of carriage by railroads and canals, should be brought into immediate comparison with the cost of transportation, or the freight only of the carrier, exclusive of the tolls, on a canal.

The freight for transportation will be found to vary on different canals, decreasing with the increase of their dimensions, and the consequent reduction of the resistance of the moving boat, which, under five miles per hour, is as the square of its velocity.

Two men, a boy, and a horse, suffice to move, at the rate of three miles an hour, a boat of fifty tons, and, aided by a second horse, of one hundred tons, on a broad and deep canal. The same force is required for moving a boat of thirty tons, at the same speed, on the Erie canal of New-York, or, if the additional horse be allowed, of fifty tons. Hence the superior economy of large canals, when compared with those of smaller dimensions. But assuming the cost of transportation upon the Erie canal as one term of the proposed comparison, which, with a breadth at the surface of but forty, and at bottom of twenty-eight feet, has a depth of four feet water, and a cent a ton per mile may

be regarded as a just measure of the freight necessary to allow an ample profit to the carrier; a sum which, when compared with the charge incurred by the Liverpool and Manchester Railroad Company, is about one-sixth; a fact which should forever put to rest all controversy on this disputed topic. For the other terms of a comparative estimate of the economy of these rival modes of conveyance, the rate of toll or profit on them, it must be recollected, that the profit of any railroad or canal, and consequently its rate of tolls, should bear a certain proportion to the cost of its execution, and the annual expense of its repairs, or of keeping up the capital expended on its construction.

In relation to the cost of the repairs of the best railroads in use, no measure has been supplied by an experience exceeding that of the Liverpool and Manchester Railroad Company.

The last semi-annual report of this company stated the branch of their last six months' expenditure, called the "maintenance of way," by which is meant the repairs of their road, at an amount, which doubled for the year, and turned into American currency, at the present rate of exchange, fell very little short of \$2,000 per mile per annum.

It is too obvious to escape notice, that the longer a railroad is used, the greater will be the cost of its annual repairs; while the older the works of a canal, the less will be the annual cost on the same account. Admitting, however, the cost of their repairs to be the same, the only point of comparison remaining to be settled is the relative cost of their original construction.

Facts on this subject are very abundant in Great Britain, and have recently become sufficiently numerous in America, to show that the estimates of the popular writers on the subject of railroads are unfounded in fact.

The Ohio canals have cost about ten thousand dollars per mile; the Erie canal of New-York, exclusive of interest on loans, and the repairs, sometimes blended in the computation of the canal commissioners of that State, with the original cost of the construction of this work, about \$18,000 a mile. The Delaware canal of Pennsylvania, five feet deep, and extending from Easton to Bristol, about 60 miles, cost for its construction about \$25,000.

The Chesapeake and Ohio canal, whose cross section exceeds in dimensions by 17 per cent. the double of that of the Erie canal, has cost, so far, for the part above tide water, about \$32,000 per mile.

On the other hand, the Baltimore and Ohio railroad has cost as much as the largest of the preceding canals, and the estimate for the branch by which it has been proposed to extend it to the city of Washington, a distance of thirty miles, is near \$50,000 per mile. The New-castle and Frenchtown, the Camden and Amboy, and the Albany and Schenectady railroads, have cost very little, if any thing, short of \$30,000 a mile; and the Columbia railroad of Pennsylvania, 82 miles, and the Portage railroad, 36 miles long, it is now known, have cost per mile, the former more than \$42,000, and the latter more than \$43,000 a mile.

Profiting by the delay of their contemplated enterprise, the Legislature of Illinois will, it is to be expected, profit by the light of experience, and prefer a uniform connexion of the navigable waters of their great river with Lake Michigan, to the construction of a railroad, where nature has afforded facilities so remarkable for a canal communication.

As to the manner of effecting this communication, whether by resorting to a summit above the level of the lake, and feeding from the Des Plaines river, or by an open cut from the lake, of twenty-seven miles, using the lake itself as a feeder; whether this cut shall be reduced in breadth to that required for a single steamboat, with only occasional passways, as on the Dismal Swamp canal, between Virginia and North Carolina, and the largest canal in the world,

that from Amsterdam to the Helder, in the Kingdom of the Netherlands; or, by allowing sufficient breadth throughout for such boats to pass every where, on the long line of ninety miles, are questions which the State of Illinois must decide, with reference to the resources which she may be disposed to apply to this great undertaking.

No estimate of the cost of any canal, nor any plan for its construction, accompanied the former survey, map, and report, of the Engineer Department, on the subject of this connexion, transmitted to the House of Representatives on the 24th of May, 1832.

The interesting views of both, furnished to the committee by Gen. C. Gratiot, the chief of that corps, and by a Representative of the State of Illinois, in answer to letters of inquiry from the chairman of this committee, are appended to this report.

Without repeated borings through the earth to be excavated, and a careful examination of the quality of the various materials to be removed, in forming the trunk of the canal, as well as an acquaintance with the quality of the stone and cement to be procured in the excavation, or found in the adjacent country, for the masonry of the canal, no exact estimate can be made of the cost of this work; and so far as its plan should be regulated by its probable cost, this examination should precede any decision on the former.

For the same reason, further aid from the United States, towards the construction of this interesting communication, should be deferred till such an examination and estimate be made; and a plan adopted by the State of Illinois, for the construction of its necessary works. When this plan shall have been fixed, and presented to the consideration of Congress, there can be no doubt that, if approved by them, additional aid will be afforded to an enterprise of such national importance.

ENGINEER DEPARTMENT,

Washington, June 6, 1834.

SIR,—I have had the honor to receive your note of the 16th ultimo, respecting the contemplated canal to connect the Illinois river with Lake Michigan; and regret that almost perpetual engagements have not allowed me to reply to it before. There is nothing on the files of this department relating to this work. A survey of the route was made some time since, and I believe an estimate, but they are lodged in the Topographical Bureau, to the chief of which I beg leave respectfully to refer you. You have been pleased to ask my views on making this a steamboat canal, and I take great pleasure in giving them, although want of sufficient data will not permit me to enter into any thing like detail, or to aim at arrangement in the ideas which I shall offer. This subject has long since attracted my attention; as it has, indeed, that of every person who has reflected upon the rapid development of the resources of the country through which it is proposed to carry this canal.

By an inspection of the map of the United States, it will be perceived that a connection between the two great valleys of the United States must be created at various points, to enable the people who inhabit them to carry on with each other, and with those of the Atlantic States, the extensive intercourse that must subsist them at no distant day. New-York and Ohio have, by their canals, contributed largely to this Union; the canals and railroads of Pennsylvania, the Chesapeake and Ohio canal, and Baltimore and Ohio railroad, though as yet in their incipency, have the same object. But of all the projects having this great design, that which contemplates the union of Lake Michigan with the Mississippi by the Illinois river, is, without doubt, both on account of the ease with which it may be accomplished, and the vast extent of navigable waters it will connect, the most important. Its effect will be to unite the St. Lawrence with the Gulf of Mexico; to

create a dependence, founded upon mutual interests, between the vast territory watered by the Mississippi, with its extensive tributaries, and that bordering on the Lakes and the St. Lawrence.

There would seem to be, in a position such as this, and to accomplish objects so vast, no question as to which of the usual means, railroad or canal, should be resorted to. The exclusive character of the first; the repeated handling of the commodities transported over it, always attended with expense; the complication of machinery, and the consequent liability to accident and detention, as well as the principle of rapid decay, inseparable from the materials used in its construction, seem to offer to my mind objections not to be overcome. A canal, on the contrary, would afford facilities commensurate with the great thoroughfares it would connect, and the vast amount of produce afloat upon them during the greater portion of the year, or in waiting upon their shores. It would be alike open to the merchant with his accumulated products of every region, from the Yellow Stone to the Sabine, from Lake Superior to Quebec, and to the humble farmer upon its very margin, with the less valuable, though to him equally important returns from his little farm. Besides, nature herself seems to have contemplated this mode of connection. The great basin of the lakes, except at its edge, is higher than any point over which the canal will have to pass, and presents the appearance of a great reservoir, specially designed to furnish in superfluous abundance the great desideratum of works of this kind. A writer, well acquainted with the features of that region of country, observes, in the North American Review, vol. 26, page 361: "There is not, perhaps, on the globe, a place where such a mighty physical revolution could be produced with so little human labor, as by opening a communication between Lake Michigan and some of the upper tributaries of the Illinois. The Des Plaines, which is a considerable stream, rises in the country between the Mississippi and Lake Michigan, and, pursuing a southerly course, approaches within twelve miles of the lake. The intermediate land is a level prairie, stretching in every direction as far as the eye can reach. Its extreme elevation above the lake is seventeen feet, and that feeble barrier is all that is interposed between this mighty mass of water and the rich valley of the Mississippi, which it overhangs like an avalanche on the summit of the Alps." Such is the country over which this improvement would have to be made. Commencing at the junction of the Rigolet with the Chicago river, it would pass by an easy single cut through this barrier for a distance of 27 miles, with an average depth of about 20 feet, where it would reach a point in the natural surface of the ground 10 ft. below the usual level of the lake; from this point, it would make the right bank of the Illinois, and enter that stream either at the mouth of the Fox or Vermillion river, passing, in that distance of sixty-two or sixty-five miles, over an almost uniform, gentle, and unbroken slope of two and a quarter feet a mile. The fine valley of the Illinois is skirted by steep and prominent bluffs; those of the right bank being so uniform, and running in a direction so well suited to the purpose, as to give reasonable hopes that the canal may be made to wash their base, and to rest upon the natural surface; thus affording the great advantage with such a supply of water as may be drawn from the lakes, of increasing its width to any desired extent, at no additional, but rather diminished expense. The question here presents itself, what should be the dimensions of the canal? Should they be limited to the present wants of that region of country? Or should they be determined by the admonitions furnished by experience on the New York canal, where the unfortunate mistake in its dimensions is so frequently and severely felt as to have given rise to the project of a ship canal to subserve the same purposes, and the data to be drawn from the heretofore great and rapid

increase of population along the shores of the Lakes, and those of the Upper Mississippi? I think the latter; and when we look to our experience on the Lakes, and see how great has been the spirit of enterprise created by the facilities of intercourse afforded by the comparatively trifling improvements on their southern shores, it really seems that the trade must soon justify almost any dimensions that can well be given. I should, therefore, recommend, most emphatically, that, from the Lake to the termination of the single cut, the width should be 200 feet, and the depth 10; and from this latter point to the debouche into the Illinois, the minimum width should be 100, and the depth at least 6. This would enable the steam and other craft navigating the lakes and the Western waters, to approach a common point, and afford accommodation during the operation of transferring or exchanging cargoes. You are aware that the surface of the lakes is subject to periodical fluctuations; this reach of 27 miles, 200 feet wide, and 10 feet deep, would effectually provide against any inconvenience that might otherwise arise from this cause. It would, besides, readily afford all the water required for lockage in the lower section of the canal, without creating a sensible current on the summit. By this arrangement, the supply of water would be constant and most abundant, however great the draught might be, and would be divested of sediment so common to small streams, particularly in times of freshets, and which makes them so objectionable for the purposes of feeders. The Des Plaines should, therefore, be diverted from its present course, and made to discharge itself into the Chicago river; this would, moreover, be attended with the precious advantage of keeping open the entrance to the harbor at the mouth of the latter stream, by increasing the volume and velocity of the water which passes through it at certain seasons. I regret that I have not the means of submitting an estimate of the cost of this great and important work; but I feel justified by the history of that country, and my own observations, as I passed through a portion of it last summer, in saying that, cost what it may, the wants of the people of that region, and those inhabiting the great valleys referred to, will, ere long, require its construction, and to the magnitude here proposed. The map which will be handed to you by the bearer is one prepared for my private use; I have sent it, believing that it may afford you some assistance; and allow me to request that you will be pleased to return it as soon as you shall have no further use for it.

With great respect, Sir, I am your most obedient servant,

C. GRATIOT, Chief Engineer.

TO THE HON. CHARLES F. MERCER, Chairman &c.

ENGINEER DEPARTMENT.

Washington, June 23, 1834.

SIR: I beg leave to submit, as a supplement to my letter of the 6th instant, the following estimate of the probable cost of a canal, of the largest dimensions, from Chicago to the mouth of the Little Vermillion of the Illinois.

The first twenty-seven miles to be one hundred feet wide at the surface, and ten feet deep; and the remaining distance of sixty-five miles to be not less than one hundred feet at the surface, and six feet deep.

From Lake Michigan to the Point where a level line ten feet below its surface will intersect the valley of the Illinois river, is twenty-seven miles, twenty-five of which should not be less than 100 feet wide, and the remaining two in short sections, distributed at convenient distances, to be 200 feet wide, to accommodate boats while detained in exchanging cargoes without interruption to the navigation. As has been stated in my letter, the average depth of the excavation for this section will be about 20 feet. This is assumed, therefore, in the estimate. The whole quantity of excavation, then, will be, on the supposition that the

base of the slopes will equal the height, and that the water level will be about midway down the excavation, giving the width of that surface as the width of the section to be excavated,

25 miles, or $44,000 \times 33\frac{1}{2} \times 6\frac{1}{2} = 9,577,772$ c. yds.
2 miles, or $3,520 \times 66\frac{1}{2} \times 6\frac{1}{2} = 1,464,000$ c. yds.

11,041,772 c. yds.

Assuming one-fourth of this, say 2,760,443 cubic yards, to be rock, and the remaining three-fourths, or 8,281,329 cubic yards, to be clay and sand.

On the Chesapeake and Ohio canal the cost of quarrying rock is put down at 31 $\frac{1}{2}$ cents, and the excavation of earth at 9 $\frac{1}{2}$ cents per cubic yard, (see page 70, Doc. 18, 1st session 22d Congress.) But as the distance to which, on this canal, the excavation will have to be removed is greater, generally, than on the Chesapeake and Ohio canal, it is supposed that an advance on these rates, of something more than one-half, must certainly cover the expense of this work.

The excavation of rock is, therefore, assumed at 50 cents, and that of clay and sand at 15 cents. We then have for

2,760,443 cubic yards of rock excavation, at 50 cents,	\$1,380,221 50
8,281,329 cubic yards of earth excavation, at 15 cents,	1,242,199 35

Cost of summit, 27 miles, 2,622,420 85

From the western termination of the summit to the Little Vermillion, the canal will follow the right bank of the river, keeping as near the bluffs as may be found necessary. Wherever the bluff is used as one of the sides of the canal, but one embankment will be required, thereby saving greatly in the cost of construction; and as it is proposed to secure to this branch of the canal a minimum navigation of six feet, the embankment will require an altitude of eight feet. This will admit, in case of necessity, an increase of an additional foot of water without greater expense. The whole distance of single embankment is 65 miles, to which 25 miles may be added as a full allowance for double embankment, at places where the bluffs recede too far from the axis of the canal: thus, then, we will have 90 miles of embankment to construct.

The dimensions proposed for this embankment are 2 $\frac{1}{2}$ yards high, 4 yards wide at top, and 14 $\frac{1}{2}$ at the base, giving a section of 24 $\frac{13}{16}$ multiplied by the length, which is 90 miles, or 158,400 yards, equalling 3,933,072 cubic yards at 15 cents, as before stated, \$589,960 80.

On the same canal the lockage cost \$1,000 per foot lift. Suppose that on account of the greater dimensions to be given to the locks on this canal, and the difficulty of procuring in a new country a sufficient number of good workmen, that each foot will cost \$2,500, which may be considered large, then 139 $\frac{1}{16}$ feet fall will cost \$348,100.

Culverts, aqueducts, and other masonry, will have to be constructed at various points, to admit the free discharge from streams that flow into the Illinois. The cost of these cannot at this time be correctly estimated, but is assumed to equal that of the lockage, which must be regarded as high, \$348,100.

Add for contingencies, such as diverting the Des Plaines into the Chicago river, pay of engineers, and other unforeseen expenses, 10 per cent. on the foregoing amount, \$390,858 16.

Recapitulation.

Cut across summit,	\$2,622,420 85
Embankment below summit,	589,960 80
Lockage,	348,100 00
Masonry, aqueducts, &c. &c.	348,100 00
Contingencies,	390,858 16

Total estimated cost, \$4,299,439 81

This is submitted with great diffidence, it being but an approximation to what the cost may be found to be on actual construction. I

have the honor to be, Sir, your most obedient servant,

C. GRATIOT, Chief Engineer.

TO THE HON. C. F. MERCER, Chairman, &c.

For the Report of N. ROBERTS, Esq. on the "Location and Estimates of the Expense of a Ship Canal around the Falls of Niagara," see page 728 of this Journal.

Manchester and Liverpool Railway—The report of the fifth half-yearly meeting of the company has been published, from which it appears that, compared with the corresponding six months of the previous year, the increase in merchandise conveyed along the line has been 7,727 tons, and in passengers 26,255 persons: and that a profit on the half-year's business has accrued of 3,469 11 16s 4d, which enables the company to declare a dividend for that period of 4l 10s per 100l share, leaving a reserved fund of upwards of 4,000l to meet contingencies. The total expenditure on the construction of the railway and works is stated at 1,132,075 4, and the net profit between July, 1833, and July, 1834, at 75,577 1, being at the rate of 9l 13s 9d per cent. per annum —[Bell's Weekly Messenger.]

Mr. Hancock's steam carriage is now undergoing the only test that will satisfy the public of its utility—actual regular work upon the road. The road taken partakes of every variety of rough and smooth, hill and dale, with vehicles, horses, and pedestrians on it of every grade; through all this he has continued his career daily for the last two months.—Mr. Hancock began his experiments in 1826, and his experimental carriage "Infant" was the first steamer that plied for hire on the common roads, in February 1831; since then he has built five others.

From the result of the experiments made in Portsmouth dock yard, in driving and pressing in large iron and copper bolts, a man of medium strength, striking with a mallet weighing eighteen pounds, and the handle of which was forty-four inches long, would start a bolt about one eighth of an inch every blow. It required a pressure of 107 tons to press the same bolt down the same quantity of space; but a small additional weight pressed it completely home. —[London Courier Oct. 15.]

An unfortunate accident occurred yesterday, during the trial of a locomotive engine built by Mr. C. Reeder, of this city, for the use of the Ohio Railroad Company. We learn that the engine, at the time of the accident, was undergoing an experiment, under the charge of the maker or his agent, for the purpose of testing its power before being delivered to the Company. It was attached to and in the act of drawing a train of burden cars, when the boiler exploded and killed the Engineer, Mr.—Neff, instantly.—The attendant fireman was injured, but not seriously. No other damage was sustained.—[Baltimore American.]

The Charleston Courier relates a most unfortunate occurrence which recently took place in that vicinity:

The locomotive engine, Augusta, was on her way from Hamburg, on Saturday last, with a train of 20 cars, loaded with Cotton, three of which were ahead of the locomotive, and the rest followed in the rear. About 3 o'clock on Saturday afternoon, near Windsor, 15 miles this side of Aiken, from some occurrence, which we have not been able correctly to ascertain, the foremost freight car fell in between the rails, and of course forcing the two behind down with it: before the locomotive could possibly be stopped, she was precipitated upon the freight cars, and one loaded car, immediately behind, was also drawn down. We regret to state that the engineer of the Augusta, Mr. Lee Allison, a very worthy young man, and one who enjoyed the perfect confidence of the company, was dangerously wounded in the fall; the lever employed to let off the steam entering his left side, just below the lower rib, and it is feared causing injury to the intestines, and thus rendering his recovery almost hopeless.

In addition to this most unfortunate occurrence, we learn that one man had his thigh broken, and several others were somewhat injured. Immediately after the accident, we understand that medical assistance was afforded to the sufferers, and as soon as the information reached town, two eminent physicians were despatched to their aid. At the time our informant left (5 P. M.) Mr. A. was perfectly collected, and although we fervently hope that the life of this amiable and useful young man may be saved, we regret to say, that the prevalent opinion is that the result will be fatal.

[From the Mechanics' Magazine, for October.]

Seventh Annual Fair

OF THE

AMERICAN INSTITUTE,

HELD AT NIBLO'S GARDENS,

October, 1834.

(Continued from page 713.)

R. H. Oldson, 1st premium for Hobby Horse—a diploma.

New England Crown Glass Company, first premium for Boston Crown Glass—a diploma. Charles Goff, 164 Maiden lane, agent.

B. Bosch, 1st premium for Secretary Book Case & Standing Mirror—a silver medal. Joseph Titcomb, 196 Broadway, agent.

Lowell Company, Lowell, Mass., 1st premium for Hearth Rugs—a silver medal. Stone, Swan & Mason, Pine street, agents.

Powers & Co., Lansingburgh, 1st premium for Oil Cloth—a diploma. T. L. Chester & Co., agents, Broadway.

Charles Attwood, Middletown, Conn., 1st premium for Metallic Pens—a diploma.

A. Denslow, Hartford, Conn., 1st premium for Card Wire, manufactured at the Rainbow Mills—a diploma. John Whittemore, 66 Frankfort street, agent.

William Field, for Vertical Trip Hammers—a diploma.

J. C. Stevens, for a model of a Fire Engine—a diploma.

Bollen, Pollard & Co., Hartford, Conn., for specimens of Box Wood and Ivory Rules—a diploma. Pettibone & Long, No. 4 Liberty street, agents.

Mr. Thompson, 1st premium for Paste Blacking—a diploma.

Wm. Sturdevant, 1st premium for purified Sperm Oil—a diploma.

W. Woolley, first and second premiums for two Surgical Bedsteads—a gold medal. For a full account of this valuable invention see p. 74, vol. iv., of this Magazine.

Dr. Leo Wolfe, third premium on surgical bedsteads—a diploma.

R. & E. Orrell, Providence, R. I., first premium on Weavers' Reeds—a silver medal.

Blake & Brothers, New-Haven, first premium on Escutcheon Latches—a diploma.

N. Hooper & Co., Boston, first premium on Mantel and Astral Lamps—a silver medal. John Nye & Co., 30 South street, agents.

C. Cornelius and Sons, Philadelphia, second premium on Mantel Lamps—a diploma. P. N. Haughwout & Son, 609 Broadway, agents.

M. Lefoulon, fine specimens of Stone Ware—a diploma.

L. Decasse, fine specimens of Fire Brick and Pipes, for conducting water, manufactured at the Salamander Works—a diploma.

Lowell Company, Lowell, Mass., fine specimen of Venetian Stair Carpeting—a diploma. Stone, Swan & Mason, Pine street, agents.

Norwalk Felt Co., Norwalk, for Felt Carpeting and Rugs—a diploma.

P. Luff & Co., fine specimen of Portable Writing Desk and Dressing Case—a diploma.

William Fulcher, splendid inlaid Centre Table, made of American wood—a silver medal.

R. J. Brown, an elegant Marble Centre Table—a silver medal.

Underhill & Ferris, a beautiful Carrara Marble Fireplace—a silver medal.

R. Heinisch, Patent Tailors' Shears—a silver medal. J. Andrews, 147 Fulton street, agent.

T. Thomas, for Painting on Glass—a diploma.

Isaac F. Bragg, fine specimen of Penmanship, sent in for exhibition only—a diploma.

A. Macklin, fine specimen of Embossing from Brass Cylinders—a silver medal.

D. Berrien & Co., for superior Smith Bel- lows, Fancy Brushes and Bellows—a diploma.

E. & J. Fairbanks, a Concentrated Platform Scale—a diploma.

G. Hodges, Andover, Mass., for Flannel

made in imitation of Welch—a diploma. Stone, Swan & Mason, agents, Pine street.

J. B. Cheeseman, fine specimen of Paste-board—a diploma.

Thomas Godwin, fine specimen of Gilding on Glass—a diploma.

Esther R. Cobb, Wrentham, Mass., a very fine specimen of a Lady's Hat, made of rye straw—a silver medal.

Henry Keep, 2 fine specimens of Fancy Tuscan Bonnets—a diploma.

A & S. White, a very handsome specimen of Tuscan Hats, made of foreign materials—a diploma.

F. A. Kipp, & C. Cordes, fine specimen of Starch—a diploma.

Mrs. S. Little, a splendid Feather Bonnet, made of Poll Parrot Feathers—a silver medal.

Sebastian Jaclard, for Wigs, Toupees, &c.—a diploma.

J. M. D. & T. W. Keating, 3 small models of Steam Engine—a silver medal.

Samuel Judd, for specimen of Spermaceti Candles—a diploma.

J. A. Riell, for specimen of Macaboy Snuff—a diploma.

Miss Mason, for specimen of Bead Bag—a diploma.

Miss Clark, several elegant specimens of Worsted Flower, and other ornamental worsted work, together with some handsome specimens of Drawing—a diploma.

Miss L. A. Browere, fine specimen of Wax Fruit and Flowers, and a pair of Transparent Blinds—a diploma.

Miss B. Van Tuyl, a specimen of Gilding on Velvet, and a Landscape Painting in oil—a diploma.

Miss Lucretia Fordham, Brooklyn, aged 14 years, a pupil of the Mechanics' School, a specimen of Worsted Embroidery—a diploma.

W. Williams, a pair of Worsted Lamp Mats—a diploma.

Miss Ann Eliza Constantine, aged 12 years, a pupil of the Mechanics' School, a piece of Shell Embossed Work—a silver medal.

Japanned Ware, exhibited by J. Smith & Son, Nos. 217 Water and 244 Grand streets, to show that Japanning can be and is brought to as great perfection in this country as in the old;

and secondly, that the said persons do manufacture japanned goods to compete with the imported; and, thirdly, that old goods which have been in use for many years, so that the japan is almost, or altogether, worn off, can be, by them, (and they are the first that have done it in this city,) be made equal to new. 2d premium—a diploma.

G. Ternan & Co., 1st premium on Japan Ware—a diploma.

F. Reynolds, specimens of Plain Needle Work—a diploma.

Miss Mallison, fine specimen of Wax Flowers—silver medal.

Miss Sarah Maria Street, New-Haven, aged 13 years, one Chair Seat, an elegant specimen of embroidered Canvas—a diploma.

Mrs. Cooke, of New-Jersey, two Shell Boxes, one pair Shell Vases, and one Shell Watch Stand—a diploma.

Miss Thompson, two vases, fine specimen of Wax Flowers—a diploma.

Miss Margaret Fanshaw, a Bed Quilt, containing 16,800 pieces—a diploma.

Mrs. W. R. Addington, a Shell Wreath and Box—a diploma.

Mrs. Baldwin, a Shell Basket—a diploma.

Lorinda Lydaback, a fine specimen of Blue Silk Vest—a diploma.

Robert Ward, fine specimen of Carving, Butcher, and Cook's Knives—a diploma. J. Andrews, 147 Fulton street, agent.

J. Russell & Co., Greenfield, Mass., fine specimen of Socket Chisels—a diploma. Edward Field, No. 1 Platt street, agent.

Edwin Ellis, Attleborough, Mass., Brass Butt Hinges—a diploma. Atwater, Baker & Wilson, No. 8 Platt street.

Wm. Morgan, an ingenious Pocket Pistol—a diploma.

D. E. Delavan, fine specimens of brass Stair Rods, brass and copper Coal Hods, brass Tea Kettle and Stand—a silver medal.

F. W. Widman, Philadelphia, case of splendid Swords—a silver medal.

Timothy Dwight & Son, New-Haven, specimen of Screw Augers—a diploma. Ibbotson Brothers, 242 Pearl street, agents.

Ewin & Heartte, Baltimore, for excellent specimen of Leveling Instruments, and improved Leveling Instrument and a Theodolite Compass—a silver medal.

Wm. J. Young, Philadelphia, for excellent specimen of Railroad Goinometer, an improved Compass, and a Level Goinometer—a silver medal.

John Roach, a fine Barometer, Thermometer, and Hydrometer, in one vertical column case—a silver medal.

Henry Cooke, for a Drill Breast-plate, with a Swivel—a diploma.

U. S. West, for a Bottled Faucet, for tapping a bottle without drawing the cork—a diploma.

N. J. Williams, for Weavers' Shuttles and Reeds—a diploma.

Jeremiah Dodge & Son, fine specimen of Wood Carving, two Stanchions for a Fire Engine—a silver medal.

Wm. E. Stoutenburgh, for a four-light Suspended Lamp and twelve-light Chandelier—a silver medal.

E. S. Scripsure, a centripetal Power Press—a diploma.

O. Parker, for Hydraulic Cement for making durable Cisterns and large Stone Vessels—a gold medal.

Eaton & Gilbert, Troy, a very fine Omnibus—a diploma.

E. & S. S. Rockwell, Patent Vault Light—a silver medal. [See page 91.]

Fredericks & Smith, for a splendid French Chair—a silver medal.

Robert Usher, two fine specimens of Spiced Beef—a diploma.

Delano & Sons, good specimen of Iron Chests—a diploma.

W. B. Green, good specimen of Iron Chests—a diploma.

F. Fossard, for a piece of La Fayette Blue Cloth, a dye substituted for Indigo—a diploma.

Aaron Gilbert, New-Lebanon, one box of Shakers' Herbs—a diploma. Rushton & Aspinwall, 86 William street, agents.

Mrs. Jessie E. Paul, for fine specimen of Cotton Fruit—a diploma.

Miss A. Lewis, for a piece of Embroidery on Canvas—a diploma.

Samuel Allen, one bale of Hemp, raised at Copenhagen, N. Y.—a diploma. Peter Remsen & Co., No. 109 Pearl street, agents.

S. N. Brewer & Brothers, Boston, for specimen of Lozenges. D. & E. L. Perkins, No. 9 Courtland st., agents.

Robert G. Lamphier, Washington city, D. C., for a fine specimen of Seal Engraving—a diploma.

Mr. Charles G. Christman, improved twelve keyed Flute, manufactured at 398 Pearl street, New-York.

The Rev. William Fisher, Meredith, Delaware county, N. Y., specimen of refined Maple Sugar—a diploma.

Refined Sugar, exhibited by H. & J. Stuart—a diploma. Without exception the most excellent and finest sugar that ever came under our notice. We recommend to all house-keepers to examine it for themselves, and we are satisfied it needs no other recommendation. Ladies particularly, will find it a valuable appendage to the tea table, as well as for other domestic purposes.

Madam Dooley, fine workmanship one pair Corsets—a diploma.

Specimen of a Straw Hat, from the manufactory of J. D. Cobb, Wrentham, Mass. The fabric is rye straw, of Wrentham growth, braided by Miss Adeline Pond, and sewed by Mrs. Esther R. Cobb. Its fineness cannot be surpassed. It is a beautiful specimen of American enterprize and industry.

Fancy Glass Working, Blowing and Spinning, by W. J. Hanington, of the American Museum and 450 Broadway.

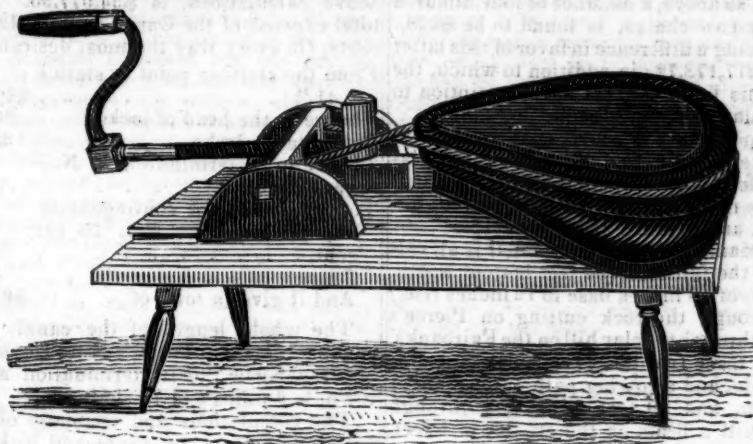
Birds and animals were made to resemble life; also pans, globe vases, decanters, segar tubes, pipes, glass plumes, and various other articles, formed at the blow-pipe of the glass while in a state of fusion, in the presence of the company. The process of glass blowing in all its varieties, at intervals blown finer than leaf gold, when it bursts with the report of a pistol, forming a shower of glass, frosting, tinted with all the various prismatic colors; glass spin-

ning, on a wheel of multiplying power; by this process red hot glass was spun at the rate of 1000 yards a minute; specimens of ribbons were shown, manufactured from this material; glass balloons, in jars, made repeated ascensions; pulse and spirit glasses, together with philosopher's or water hammer.

H. J. S. Hall, best specimen of Fire-Works—a diploma.

Nathan Post's Patent Hame Collar Blocks, manufactured and sold by Francis S. Lane, No. 279 Bleecker street, New-York.

These patent blocks and rights may be had



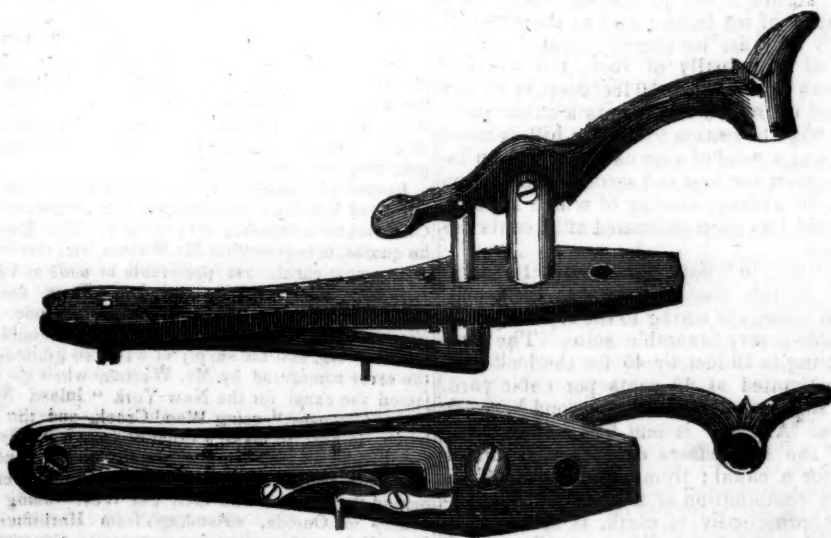
at the place above mentioned, or at the store of Henry Storms, No. 179 Water street, corner of Burling slip, where one may be seen constantly in use. The proprietor of this invention takes pride in offering it to the trade as one of the most important discoveries in crimping and perfecting the hame collar, both with regard to saving labor and producing accuracy of form, that has ever been the subject of a patent.

"I hereby certify that I have used one of the above mentioned blocks for shaping hame collars, and find it to be a great labor saving machine, which overcomes the great difficulty heretofore experienced in making collars, both for the ease of the horse and a sufficient bed for the hame; and I do not hesitate to say that it is particularly worthy the notice of manufacturers. HENRY STORMS, Saddler."

[The above is doubtless important, particu-

larly when we consider the pain and injury inflicted on horses from the use of ill-shaped hames.]

We have seen a Gun Lock,* invented by a sporting gentleman of Virginia, with which we are much pleased, and, if we are not mistaken, it will supersede the percussion lock now in use. It is styled the "Lateral Percussion Lock," and differs from the lock now in use in having a hammer that plays lateral to and parallel with the barrel on the tube, which is introduced precisely where the touch-hole of a flint gun is usually placed. The interior construction is remarkably plain, not half so complex as the common lock. By the lateral hammer, the upright cock of the flint and the hammer of the percussion gun is entirely done away with; consequently, the top or upper surface of the



barrel presents a smooth and perfectly even appearance. Sight in the flying shot is much more accurately taken by this means, in consequence of the absence of the elevated cock. The facility with which the flint gun can be altered to the percussion is another very great advantage arising from this improvement. The

* These were intended to be exhibited at the Fair, but arrived in New-York too late.

gentleman has promised us a more particular description of the lock, which will be hereafter inserted. [See engravings above.]

Ne-plus-ultra, or Mississippi Life Boat, invented by Daniel M. Toll, M. D. of Schenectady. The object and use of the boat being determined upon, ought to govern its dimensions; the hull of one boat is to be constructed of the requisite dimensions, that is to say, of pro-

per width, length, and depth, whose sides, between the curve where the bow commences and the curve where the stern commences, are to be a perfect longitudinal parallelism; her sides, in a vertical direction, are to observe a curvilinear line—they are to be, in other words, a perfect arc of a circle. A cross section of the hull is to be a circular zone, the longest cord of which is to be the transverse line of her deck, and the shortest cord to be the transverse line of her bottom; her bow and stern are to be shaped and modeled in such a manner as will give her, when in motion, the greatest possible relief from positive and negative pressure. Her deck and bottom are to be pierced or perforated with a series of openings, in a lineal direction from bow to stern, of a magnitude in her deck to receive the largest circumference of a hollow sphere or globe, and in her bottom of such diminished dimensions as to receive only a segment of the same globe or hollow sphere. Bulkheads are to be constructed perfectly water tight within her hull, that is, between her deck and bottom, and to join close all around upon the margin of the perforation which is in the bottom of the boat or hull, and carried up and joined close on and all around the margin of the perforation in the deck: this bulkhead is to be shaped as to assume a globular form, and to encompass and give facility for a globe to revolve, which is to be suspended in its chamber: the residue of the perforations and chambers, for the reception of the globes, are to be finished in the same manner: the residue of the whole remaining part of the boat or hull is to be divided off into compartments by perfect water-tight bulkheads: next, a requisite number of hollow globes or spheres are to be made, and of a proper magnitude, mounted with iron axletrees through their axis, and the ends sufficiently projecting to answer for gudgeons; these globes, so mounted with their axletrees, and perfectly water tight, are to be suspended in the above mentioned chambers, fastened and secured in sockets or boxes in a workman-like manner, and with a segment of the globes projecting through the orifice in the bottom of the boat or hull, so that the globes may revolve with facility, to enable them to carry the boat over the shoal or bar with facility; this one boat or hull, now considered finished, another, of the same dimensions, and built every way in the same manner, is to be placed by her side and parallel with her, and at a proper distance: these two twin boats are to be connected with suitable cross-beams and timbers, supported a sufficient height above deck with stanchions, and the whole well secured with proper braces and fastenings in a workman-like manner, the whole of which will constitute the float or bottom of my boat.

The above described boat is intended should be built either of iron or of wood, or of iron and wood combined, or of any other material; she is intended to be used for passage or freight, or any other use that any other boat is used for, and she is intended to be moved by any tractile or motive power. And further—on the above float or bottom of my boat, a superstructure is to be erected, as fancy or necessity may direct or dictate. And again, it is the intention of the inventor, that the stern of each of the twin boats should be carried back the requisite length, in imitation (or nearly so) of an eel's tail, so as to give her run a clean, smooth exit, with the least possible distress from negative pressure when in motion; her bows are to be carried forward so as to assume the most elegant tapering form, thereby enabling her to separate the resisting particles in the most easy manner, to give relief to positive pressure.

The invention and improvements herein contemplated consist in giving additional security to my water wheel, by being placed between the twin boats, and by obtaining buoyancy and speed, and likewise by giving facility to the crossing of shoals or bars in shallow water by the rolling and revolving of the globes on their axles, and likewise by securing and retaining the buoyancy of the whole of the uninjured

part of my boat as a compensation for the loss of that part which might be pierced or penetrated by the impetus of a snag or any other substance.

The objections that may be raised or suggested to her speed, in consequence of the projections of her globes through her bottom, will yield on the least reflection, for as soon as the resistance amounts to the sum of the friction on the axletrees, the globes will revolve and thereby relieve the resistance.

And again—the apprehension that may be had on the score of resistance from the small and slender sheets of water that will be standing around the globes in the chambers, will as readily vanish by reflecting that the cohesion of water is merely nominal.

Observations.—This boat may be built and used without either globes or compartments, where there is plenty of water and no danger of having her hulls pierced or perforated. Again, she may be used with or without her globes, with or without her compartments, or any other way, as the case may require.

Report on the Location and Estimates of the Expense of a Ship Canal around Niagara Falls.

This canal commences at Porter's Store House on the Niagara River, two and a half miles above the Falls, and passes along the margin of the Niagara River, over the State land at Old Fort Slossar, to the village of Manchester; thence, still keeping along the margin, it passes by a summit level of eight miles and sixty-five chains to the eminence near Fort Gray, immediately south of Lewistown. Here the locks commence; and in a distance of one mile and sixty-seven chains are located thirty-two locks of ten feet lift each, making the total lockage at this place to be three hundred and twenty feet; from eight feet below the level of the water at its commencement to the same distance below the water at its proposed termination in the harbor at Lewistown.

As this canal is to connect the navigation of the upper with the lower lakes, (and at some future day perhaps with the Atlantic,) the capacity of its section and the size of its locks have been calculated for the most useful size of vessels navigating those waters. Its section through the earth cutting has been calculated for 36 feet width at bottom, eight feet deep, and sixty feet at the water line; and through the rock cutting, thirty feet in width at water line, with suitable recesses for vessels to stop in while others are passing—of these but two or three will be necessary. The dimensions proposed for the locks are twenty-five feet wide in the chamber, and one hundred and twenty between the gates.

The great utility and increasing importance of this work will require the size of the canal and locks to be of these dimensions, and to be constructed in the most permanent and durable manner; with this view, the locks on this canal are calculated to be built of stone in a strong and substantial manner. In fact, it is believed to be the most economical, as stone of a suitable quality can be obtained from the rock cutting in the immediate neighborhood of the locks. These latter have been so located, that a basin of two hundred feet in length is placed between each combination of five locks for four sets. The others are more scattered to suit the nature of the ground. Immediately adjoining the river will be a combination of six locks, the lowermost of which will terminate in eight feet below the level of the water in the Niagara, which here affords a spacious and safe harbor directly in front of the village.

A comparison has been made of the expense of the route by Gill Creek, and that by Manchester and Niagara Falls; and although this latter route is nearly two miles the longest, yet it will cost less by two hundred thousand dollars than the former by way of Gill Creek, as will appear by the annexed abstract.

An estimate of the expense of constructing the canal from Porter's Store House on the Niagara River by the Gill Creek route to station "41," where it intersects the Manchester line at station "71," (see the accompanying map,) a distance of two hundred and fifty chains, is found to be \$445,938.31, with no allowance for recesses and tow-path, calculated in deep cutting at fourteen feet high and ten feet wide.

An estimate of constructing the canal from the same point as before, along the margin of the Niagara River through Manchester to the same point as above, a distance of four hundred and twenty-two chains, is found to be \$228,759.59,—being a difference in favor of this latter route of \$217,178.72; in addition to which, the rock on this latter route is of a description to be easily blasted and drained.

It is proper also to remark, that on the Gill Creek route only the first 36 chains is calculated at 36 feet wide at bottom, with the usual slopes; the remainder 214 chains is through a hard rock, and is taken at 30 feet wide.

On the Manchester route the canal is all calculated at the full size, (36 feet bottom width, with slopes of 18 inches base to 12 inches rise,) except through the rock cutting on Pierce's farm, and through the clay hill on the Fairbanks' farm. At these two places it is calculated at 30 feet wide, and a towing path 14 feet above the bottom, and 10 feet wide, and through the clay hill a beam on the off-side of 5 feet, and the usual slopes to the surface. These two deep cuts being separated by three-fourths of a mile of canal of the full size, no recess for passing has been deemed to be necessary in them, and consequently there has been no allowance for them in the calculations.

From station "41," where the Gill Creek route and that by Manchester come together, the line passes over ground very favorable for the construction of a canal. There are no steep sideling grounds, and the location can be so made as to admit of every section being perfectly drained. The rock appears to be such as will quarry very easily, and will be of the greatest use in constructing the locks, to the site of which latter the rock cutting is immediately contiguous. From station "41" to the head of the locks at station "82," at Fort Gray, is a distance of two hundred and twenty-four chains, the expense of which part of the line is estimated at \$208,668.54.

From station "82" to station "85½," is a combination of ten locks; and as the side hill on which they are necessarily located is very steep, and principally of rock, the average cutting has been taken at 10 feet deep, by 45 feet wide, and estimated at 50 cents a cubic yard. From "85½" to station "87," the hill is more sloping, and a pond of nine chains has been located between the first and second combination of locks, the average cutting of which is about 10 feet, and has been estimated at 25 cents per cubic yard.

From "87" to "90½" are located 10 locks. The hill at this place appears to be nearly free from stone, and owing to the dryness of the soil affords a very favorable scite. The average cutting is 10 feet by 45 for the lock pits, and is estimated at 25 cents per cubic yard. From "90½" to "93" is another pond between the locks. At "93" is one lock; from "93" to "97" the line passes over very favorable ground for a canal; from "97" to "100" is located a combination of five locks. The excavation, principally of earth, is averaged at 14 cents per cubic yard. From "100" to "104" is over a handsome flat, the cutting in which is very favorable.

From "104" to "107" is a combination of six locks; the cutting here will be deep, and by the appearance of the bank of the Niagara River, there will be a considerable proportion of red sand stone; it is, however, not very hard to excavate; the average cutting is estimated at 25 feet, with a slope of one to one.

The locks being calculated at 10 feet lift each,

will be 32 in number, and will require 100,000 perches of stone masonry, which, considering the abundance of the materials, are estimated, when laid in the work, at \$3.25 per perch, which gives, for 100,000 perches, the sum of \$325,000. Foundations, gates, castings, and wrought iron for each lock, is estimated at \$900 for each lock, making for 32 locks a sum of \$28,800, which, with the masonry, amounts to \$353,800 as for the total of lockage.

The total expense of the line from Fort Gray, to its termination in Niagara River, a distance of 147 chains, as estimated in the above calculations, is \$54,977.90. And the total expense of the Canal by the Manchester route, (in every way the most desirable,) is

From the starting point to station "41,"	\$228,759.59
Thence to the head of locks,	208,668.54
Estimate for locks,	353,800.00
Thence to its termination in Niagara River,	54,977.90
To which add for contingencies, superintendence, &c., 10 per cent,	84,620.60

And it gives a total of . . . \$930,826.63

The whole length of the canal, from its commencement at Porter's Store House, by way of Manchester, to its termination at Lewistown, is 9 miles and 73 chains.

The calculations and estimates of expense for constructing the canal and locks are all reasonable; and it is believed that, for the prices above stated, with good economy and judicious management and superintendence, the Canal could be completed. All of which, together with the size of the Canal and locks, and the preference which is to be given to one or the other of the above described routes, is most respectfully submitted by

NATHAN S. ROBERTS, Engineer.

January 28, 1826.

SHIP CANAL.

We publish with pleasure the following letter from an intelligent gentleman at the West to his friend in this city, which will be read with pleasure by those who desire to promote the interesting project of a Steamboat Canal from Oswego to Utica. It affords a full and able refutation of the arguments urged by a writer in the American, under the signature of "Brindley," against the practicability of the measure.

Utica, Nov. 3, 1834.

To ————, Esq.—Dear Sir:—I have received your letter, with the resolutions passed at the Ship, or Steamboat Canal Convention, held in Utica, the 11th of September last. I am convinced that it is only necessary to discuss the subject, to gain friends to the project.

I perceive a writer in the American, over the signature of Brindley, has attacked the Report of the Chamber of Commerce of your city. The doctrine he quotes, in letters from Mr. Weston, viz. that small and narrow canals are preferable to wide and deep canals, is now entirely exploded. They are no doubt necessary in England, from whence Mr. Weston writes; and where our creeks would be called rivers, and the supply of water so limited; but the error committed by Mr. Weston, when he projected the canal for the New York "Inland Navigation Company," using Wood Creek, and the Mohawk, in part, to make a canal of two feet deep!! (on the line where eight feet water, by one hundred feet wide, is now wanted,) was soon found as much behind the wants of the then Far West—being the county of Oneida, extending from Herkimer to Lake Erie, and sending one member to Congress—as the capacity of the Erie Canal is now too limited for the trade of our own State, without great delays, and serious injuries to boats, &c.; this canal actually passing at the time, at Alexander's Lock, west of Schenectady, by an official report, a boat every 12 to 15 minutes during this whole season, day and night, including breaches and Sundays.

If Brindley will judge from past experience, he will have no difficulty in answering the query he makes, as to the capacity of the Erie Canal. When the contemplated double locks shall have been made,

and an additional foot added to embankments, the answer (to judge from past experience, and by the continued rapid increase of the West and "far West") naturally presents itself—ere fifteen years shall have passed, it will be unable to answer the demands on it from the West, and *probably*, not those from our own state, when we take into view, that within that period of time, we shall have increased to four millions of souls. The necessity, therefore, for a large Steamboat Canal round Niagara Falls (only 8 miles, and will cost about \$1,000,000,) and from Oswego to the Hudson, is so apparent, when we view what our British neighbors are doing on the St. Lawrence, that even should these two works cost the sum of \$9,000,000, as mentioned by Brindley, grounded on the liberal calculation of Judge Wright, since let at from 20 to 30 per cent. less for locks along and in the St. Lawrence, 200 feet long, 55 wide, and 10 feet deep, it should not be considered by our Legislature one moment, although a much less sum will complete this work. From Niagara to Utica, competent engineers have estimated two millions of dollars as covering the *entire expense*, as nearly for the whole of this distance there are natural waters; and there is no question but the Canal can be so constructed as to employ steam to tow barges, and cheapen transportation. Then, when the work is completed to the Hudson, vessels may leave New-York for New-Orleans, as it cannot be long ere the State of Illinois will employ the liberal and sufficient donations by the General Government in lands, to construct a Ship Canal on the magnificent plan (see Congress Documents, No. 546—Map, Survey and Report of Chas. F. Mercer, 25th June, 1834,*) contemplated by Col. Gratiot, United States Engineer: to be 200 feet wide, 10 feet deep, and be fed by the waters of Lake Michigan!!! the barrier of sand from Chicago to the Illinois River, 12 miles, being only 8 to 15 feet. Removing this trifling difficulty, and then enlarging the Illinois River to steamboat navigation, at all seasons of the year, (by the official estimate) will only cost \$4,220,000. The circuit of a large part of the United States may be made, and an inland steam navigation of 25,000 miles be effected with the largest and richest body of land in the world, with a varied climate and products, mutually dependant on each other.

Brindley, although apparently acquainted with the country round Rome, the summit, labors under an error in supposing that the supply of water is not abundant for a Ship Canal. The waters and springs for a country 30 miles by 40 miles square, to wit, the E. and W. branches of Fish Creek, and the Black River, can be emptied into the Mohawk at Rome, at a small expense. This fact will, I trust, put Brindley at rest on this subject. A supply for the contemplated route was feared, as he quotes, and, with other causes, produced as a bugbear, to get the Canal to Buffalo, in the famous Canal Report of 2d March, 1811, when Mr. Weston (Brindley's authority) pronounced a Canal, where the Oswego Canal now is, "impracticable!!" So much for Brindley and his authority, against large Canals.

Such is the increase of the West, in trade and numbers, that it exceeds fancy and calculation. We cannot get too many avenues and outlets for this valuable commerce, now in its infancy, as it will increase faster than the facilities to reach the Atlantic can be made; and these channels will all produce a revenue equal to the interest on their cost, not excepting even the New York and Erie Railroad, a most important work to the State and City of New York.

The Erie Canal, after deducting 28 1/2 per cent. of tolls in 1833, produced 15 per cent. interest on its entire cost, without taking into view what the State got and is getting yearly in duties from the increased sale of salt, and value added to the land owned by the State.

This year the tolls have been further reduced 25 per cent.; and such has been the increase of trade, even under the derangement of the currency and bank facilities, and with an unfortunate dispute with the Ohio Canal Commissioners, which has turned much trade to Philadelphia, that this year is expected to exceed the ratio of the last year, nine-tenths of the tolls being from our own State. What will the Canal Fund produce when the necessity of the case will cause the State to permit the Utica and Schenectady Railroad to carry goods at canal tolls for rapid and early transportation by steam?

It now nets above a million per annum, and, with the funds on hand, will pay off the entire cost of all

our Canals, to this period, *within* four years. Should the tolls then be further reduced, or say half a million of dollars be appropriated to pay the expenses of the State Government, and add \$100,000 per annum to the literary fund, we shall still have an income of \$500,000; on which we would be warranted in borrowing one hundred millions of dollars, to make such improvements (even should they not pay one cent of income, but experience teaches the reverse,) as the Ship Canals, Southern Railroad, Black River and Orleans Canals.

New York, fortunately, possesses the summit and table lands from the great Lakes to the best port on the Atlantic; and with the capital and facilities now centred in New York, can, by a liberal policy with regard to internal improvements, retain the largest portion of the trade with the far West, which must go to the ocean by the Welland and St. Lawrence Canals, and supply our New England States with bread stuffs, unless we act promptly, or our British neighbors are blind to their own interest—a charge not now to be made, although hinted at in 1811, when the Canal Commissioners feared to let the trade down from Lake Erie into Lake Ontario, and was the main argument with Weston's statement of the "impracticability" of the route on the Oswego River, and want of water on the summit, then urged, since proved incorrect, which prevented the adoption of a Canal, then contemplated, on the steam Canal route, of 60 feet on the surface and five feet deep.

To you I am aware that the subject is not new, but I could not let Brindley's statements pass unexamined and not controverted.

With esteem, yours, truly,

J. E. B.

NAVIGATION OF THE RED SEA.—RAILROAD ACROSS THE ISTHMUS OF SUEZ.—It has been mentioned that a sum of money had been voted by the British Parliament for the purpose of ascertaining the practicability of opening communication with India, by means of steam navigation through the Euphrates and the Persian Gulph. It is now announced, that whatever may be the result of the survey, steam will be called into operation in effecting the passage to India, by at least one channel, viz: that by the Red Sea. Mohamed Ali, the Pasha of Egypt, desirous of profiting by the determination of the British Government, has decided on the construction of a railroad across the Isthmus of Suez. It is supposed that a ship may be transported on the railroad, and thus the necessity be avoided of unloading and relading the cargo. Two years are judged to be sufficient for the proposed work; meanwhile, passengers can cross from the Nile to the Red Sea without difficulty or danger; so that when the plan is brought into operation, and it is intended that it should without delay,—a voyage from London to Bombay may be made in about two months. As numbers of persons in England are desirous of emigrating to Hindostan, they will be likely to avail themselves of this course, rather than the circuitous one by the Cape of Good Hope.

By recent letters from Bombay we learn that most favorable results are likely at last to accrue from the mission of Colonel Pottinger in the year 1831, to the Court of Sind, undertaken by orders from the East India Company. The object of the embassy was to throw open the navigation of the mighty river, the Indus, to the merchants of India and Europe: this point is now gained, and the tolls to be levied on all vessels entering or leaving the Indus, are agreed upon; but this toll is not to be considered as a source of revenue to the traders.—An official communication has been received, we understand, by Colonel Pottinger, from the sons of the late Morad Ali, the new Sovereign of Sind, by a vakeel or envoy extraordinary; a treaty has been drawn up and forwarded for the ratification of the Governor-General. It would appear that a small British force will be stationed at the mouth of the Indus for the protection of the trade at that place, and to superintend the collection of the taxes. The object thus attained is viewed as one of great national importance, and which, when contemplated in conjunction with steam navigation in the Red Sea, will probably, in no very long time, open a wide field for British enterprise. Too much praise cannot be awarded to Colonel Pottinger for

the wise and prudent management of a very difficult negotiation.—[Morning Chronicle.]

Iron Railroad.—A trial has been made in France of a new description of Iron Railroad, the invention of Messrs. Piot and Ronen. It took place a few days ago, near Vincennes, and was considered as successful. The advantage consists in the comparative saving of expense, and the susceptibility of receiving carriages of a very simple construction.

The Rhine.—The Cologne Gazette says—"The steamboats continue to be crowded with passengers. It is calculated that the number of persons who have travelled by the steamboat this year only, between Mayence and Cologne, is above 120,000.

It is worthy of remark, that with all the expense Russia is at in improving her roads, they are not made to join those of Poland to the possessions of Prussia. In their present state the Russian army cannot come within two days' march of the frontier of Prussia.

FOREIGN VARIETIES.

Bronze Medals of the Kings of France.—It is in contemplation in Paris, to strike 74 medals, with a view to illustrate the principal events connected with the French Monarchy. This plan was, in fact, conceived by Louis XIV. Napoleon adopted it with enthusiasm, and Charles the Tenth gave orders for its execution. It is now to be carried into effect by some speculators, but the Minister of the Interior has given his authority for the medals to be struck at the Royal Mint, and some of them have already been struck. The two figures of Louis XIV. and Henry IV., which are finished, are said to be beautifully executed.—[Athenæum.]

Captain Ross's Narrative of his Four Years' Residence in the Arctic Regions will be published in December.

Irishmen in Office.—The three Secretaries of State, Lords Palmerston and Duncannon, and Mr. Spring Rice, are Irishmen; so also are the Marquis Wellesley, viceroy of Ireland; Lord Aylmer governor-general of Canada; Lord Clare, governor of Bombay; Marquis of Sligo, governor of Jamaica; General Bourke, governor of New South Wales; and Sir Dudley St. Leger Hill, governor of Lt. Lucia. The number of distinguished Irishmen high in office is at the present day greater than ever it was in the history of the country.

Mount Blanc.—Dr. Martin Barry, a Scotch gentleman, has just succeeded in an ascent of Mount Blanc. He accomplished it on the 16th September.—[Helvetic.]

The paintings and statues sent to St. Petersburg, from Derezyn, the residence of Prince Eustache Sapieha, have been distributed amongst the different Royal Palaces. The statue of Orpheus, by Canova, now forms one of the ornaments of the Hermitage.—The Emperor has presented some of the magnificent vases in porphyry to his brother-in-law, the Hereditary Prince of Prussia.

The separate fund for enabling the British and Foreign Bible Society to supply the emancipated negroes who are enabled to read with Psalters and Testaments falls very far short of the expectation generally entertained: the sum wanted is £20,000, but not more than a fourth of this has been subscribed.

Sir John Hobhouse, who has been above three months a Cabinet Minister, is only said to have been twice at his office.

The elder member of the ducal family of Berkenfeld, William Duke of Bavaria, has just ceded his domains at Banz, in the Upper Palatinate, and his appanage of 225,000 florins, to his grandson, Duke Maximilian of Bavaria, brother-in-law of the King. He has reserved for his own use 1,800 florins.

Among the various changes that have lately taken place in the public offices, that of the removal of the Exchequer Office from the Palace yard is one.

The front walls of these houses were erected by Mr. Groves, the architect, who always refused to acknowledge it, in consequence of the ridicule thrown upon its style by the witty R. B. Sheridan: these are now down, and exhibit the old Gothic buildings, formerly the palace of Edward the Confessor, likewise the stabling of the Protector Cromwell.

* All of which may be found in this number of the Journal, except the field notes of the Engineer, which will be published next week.

NEW-YORK AMERICAN.

NOVEMBER 15—21, 1834.

LITERARY NOTICES.

SOPHOCLES.—Translated by T. Franklin, D. D. 1 vol. Harpers' Classical Family Library.—We have here the only seven that have come down to us out of the hundred and thirty plays of the immortal poet who carried the Greek Drama to perfection. "Sophocles," observes the accomplished professor to whom the public is indebted for these translations, "may with truth be called the prince of ancient dramatic poets: his fables (at least, of all those tragedies now extant) are interesting and well chosen; his plots regular and well conducted; his sentiments elegant, noble, and sublime; his incidents natural; his diction simple; his manners and characters striking, equal, and unexceptionable; his choruses well adapted to the subject; his moral reflections pertinent and useful; and his numbers, in every part, to the last degree sweet and harmonious. The warmth of his imagination is so tempered by the perfection of his judgment, that his spirit, however animated, never wanders into licentiousness; while, at the same time, the fire of his genius seldom suffers the most uninteresting parts of his tragedy to sink into coldness and insipidity. His peculiar excellence seems to lie in the descriptive; and, exclusive of his dramatic powers, he is certainly a greater poet than either of his illustrious rivals. Were I to draw a similitude of him from painting, I should say that his ordonnance was so just, his figures so well grouped and contrasted, his colors so glowing and natural; all his pieces, in short, executed in so bold and masterly a style, as to wrest the palm from every other hand, and point him out as the Raphael of the ancient drama."

Elevation and purity of style, with great precision and completeness of form in his dramas, and marked distinctness and individuality in his characters, were the qualities which with so critical a people as the Greeks, placed Sophocles first among his illustrious contemporaries. The melting tenderness of Euripides and the savage grandeur of Eschylus—of whom Schlegel says that Tragedy sprang from his head in full armor, like Pallas from the head of Jupiter—seem neither to have delighted the fastidious Greeks so much as the harmonious blending of the great qualities of a dramatic poet, which critics have allowed to meet in Sophocles, and which, notwithstanding the inexhaustible invention of the former and the majestic simplicity of the latter, have secured for the illustrious pupil of Æschylus the preference of the judicious in all ages. The public at large have now an opportunity of becoming familiar with the great master of the Greek Drama, whose remains are here given in a form so cheap as to come within the means of every reader.

THE KNICKERBOCKER MAGAZINE, No. 5, VOL. IV. FOR NOVEMBER.

THE AMERICAN MONTHLY MAGAZINE, No. 20, VOL. IV. FOR NOVEMBER.

The improved and improving character of the first of these periodicals is so generally admitted and commented upon, that it is unnecessary to add our opinion to the general voice. But a bad accident which happened lately to the accomplished Editor of the New Monthly, and prevented the appearance of one of the numbers at the usual time, has attracted our attention particularly to the one before us.—The temporary omission of the October number is amply compensated for by the talent and scholarship displayed in that before us. There is indeed a tone and character about the American Monthly, which if they do not rank it above its competitors, certainly make it stand by itself as a marked, as well as able publication. They spring from the severe taste and ample resources of its editor, who,

infuses the soul of a scholar, and spirit of a man of varied talents into his excellent publication. The work has now gone on for nearly two years, continually making new readers for itself, and fixing the predilection of those who always sustained it. We have already taken pleasure in extracting the eloquently written sketches, entitled, "Passages from the life of Mary Queen of Scots," as they have from time to time appeared in this Magazine, and we now give in an abridged form, an attractive article from the same gifted hand. It is entitled

The Queen's Remorse.

The twelfth hour of the night had already been announced from half the steeples of England's metropolis, and the echoes of its last stroke lingered, in mournful cadences, among the vaulted aisles of Westminster. It was then, as now, the season of festivity, the high tides of the banquet and the ball, that witching time of night. No din of carriages, or glare of torches, disturbed the sober silence of the streets, illuminated only by the waning light of an uncertain moon; no music streamed upon the night-wind, from the latticed casements of the great, who were contented, in the days of their Lion Queen, to portion out their hours for toil or merriment, for action or repose, according to the ministration of those great lights, which rule the heavens with an indifferent and impartial sway, and register his brief career of moments, to the peer as to the peasant, by one unvarying standard. A solitary lamp burned dim and cheerlessly, before a low-browed portal in St. Stephen's; and a solitary warder, in the rich garb still preserved by the yeomen of the guard, walked to and fro, with almost noiseless steps, his corselet, and the broad head of his shouldered partisan, flashing momentarily out from the shadows of the arch, as he passed and repassed beneath the light, which indicated the royal residence, distinguished by no prouder decorations, of her, before whose wrath the mightiest of Europe's sovereigns shuddered. A pile of the clumsy fire-arms then in use, stacked beneath the eye of the sentinel, and the dark outlines of several bulky figures, outstretched in slumber upon the pavement, seemed to prove that some occurrences of late had called for more than common vigilance in the guarding of the palace. The prolonged cry of the watcher, telling at each successive hour, that all was well, had scarcely passed his lips, before the distant tramp of a horse, and the challenge of a sentry, from the bridge, came heavily up the wind. For a moment, the yeoman listened with all his senses, then, as it became evident that the rider was approaching, he stirred the nearest sleeper with the butt of his heavy halbert. "Up, Gilbert! up man, and to your tools, ere they be wanted.—What though the earl's proud head lie low, he hath friends and fautors enough in the city, I trow, to raise a coil whene'er it lists them!"—The slumbers of the yeomen were exchanged, on the instant, for the guarded bustle of preparation; and, before the horseman, whose approach had caused so much excitement, drew bridle at the palace gate, a dozen bright sparks glimmering under the dark portal, like glow-worms beneath some bosky coppice, announced the readiness of as many levelled matchlocks.

"Stand, ho! the word!"

"A post to her Grace of England,"—was the irregular reply, as the rider, hastily throwing himself from off his jaded hackney, advanced towards the yeoman.

"Stand there!—I say—no nearer on your life! Shoot, Gilbert, shoot, an he stir but a hand-breadth!"

"Tush! friend, delay me no!"—replied the intruder, halting, however, as he was required to do—"My haste is urgent, and that which I bear with me passeth ceremony. A letter to the Queen! On your heads be it if I meet impediment. See that ye pass it to her Grace forthwith."

"A letter—ha!—there may be some device in this—yet pass it hitherward." A broad parchment, secured by a fold of floss silk, with its deeply sealed wax attached, was placed in his hand. A light was obtained from the hatch of a caliver, and the super-scription, evidently too important for delay, hurried the guards to action. "The Earl of Nottingham,"—it ran—"to his most high and sovereign lady, Elizabeth of England. For life! for life! for life!—Ride, and run, haste, haste, posthaste, till this be delivered."

The chamberlain, so great was considered the urgency of the matter, was summoned from his pillow, and he with no small trepidation, proceeded at once to the apartment of Elizabeth. His hesitating

tap at the door of the ante-chamber,—occupied by the ladies whose duty it was to watch the person of their imperious mistress by night,—failed indeed to excite the attention of the sleeping maidens, but caught at once the ear of the extraordinary woman whom they served. "Without there?"—she cried in a clear unbroken tone, although full sixty winters had passed over her head.

"Hunsdon! so please your Grace, with a despatch of import from the Earl of Nottingham!"

"God's death! ye lazy wenches! hear ye not that man without, that I must close my throat in clamoring? Up, hussies up, or by the soul of my father, ye shall sleep for ever." The frightened girls sprang from their couches at the raised voice of the angry queen, like a covey of partridges at the yelp of the springer, and for a moment all was confusion.—"What now, ye fools,"—she cried again in harsh and excited accents, that reached the ears of the Earl without.—"Hear ye not that my chamberlain awaits an audience? Fling yonder robe of velvet o'er our person, and rid us of this night gear—So!—the mirror now! my ruff and eurch! and now—admit him!"

"Admit him!—An it lists your Grace, it were scarce seemly in ladies to appear thus disarrayed."

"Heard ye—or heard ye not!—I say admit him! Think ye, old Hunsdon cares to look upon such trumpery as ye, or must I wait upon my wenches' pleasure? God's head, but ye grow malapert!"

The old queen had not yet ceased, before the door was opened; and, although the ladies had taken the precaution of extinguishing the light, and seeking such concealment as the angles of the chamber afforded, the sturdy old earl—who, notwithstanding the queen's assertion, had as quick an eye for beauty, as many a younger gallant—could easily discover that the modesty, which had demurred to the admission of a man, was not by any means uncalled for or over squeamish. Had he been, however, much more inclined to linger by the way, than his old fashioned courtesy permitted, he would have been a bold man to delay, for twice, ere he could cross the floor to her chamber, did his name reach his ears in the impatient accents of Elizabeth.—"Hunsdon! I say—Hunsdon! 'sdeath, art thou crippled, man?"

"So! give us the letter—there! Pause not for thy knee, man; give us the letter!"—and tearing the frail band, by which it was secured, asunder, she was in a moment entirely engrossed, as it would seem, in its contents. Her countenance waxed paler and paler as she read, and the shadows of an autumn morning fit not more changeably across the landscape, as cloud after cloud is driven over the sun's disk, than did the varying expressions of anxiety, doubt, and sorrow, chase one another from the speaking lineaments of Elizabeth.

"Hah!" she exclaimed after a long pause—"This must be looked to—see that our barge be manned forthwith, and tarry not for aught of state, or ceremony. Thyself will go with us, and stop not thou to don thy newest fashioned doublet; this is no matter that brooks ruffling!—'Sdeath man 'tis life or death! and now begone, Sir! we lack our tirewoman's service!"

An hour had not elapsed, before a barge, easily distinguished as one belonging to the royal household, by its decorations, and the garb of the rowers, shot through a side arch of Westminster bridge, and passed rapidly under sail and ear, down the swift current of the river, now almost at ebb tide. It was not, however, the barge of state, in which the progresses of the sovereign were usually made; nor was it followed by the long train of vessels freighted with ladies of the court, guards, and musicians, which were wont to follow in its wake. In the stern sheets sat two persons; a man advanced in years, and remarkable for an air of nobility, which could not be disguised even by the thick boatcloak he had wrapped about him, as much perhaps to afford protection against the eyes of the inquisitive, as against the dense mists of the Thames,—and a lady, whose tall person was folded in wrappings so voluminous, as to defy the closest scrutiny. At a short distance in the rear, another boat came sweeping along, in the crew and passengers of which it would have required a penetrating glance to discover a dozen or two of the yeomen of the guard, in their undress liveries of gray and black, without either badge or cognizance, and their carbines concealed beneath a pile of cloaks. It was Elizabeth herself, who in compliance with the mysterious despatch she had so lately received, was braving the cold damps of the river, at an hour so unusual, and in a guise so far short of her accustomed state.

The royal barge was darting with a speed that

increased at every instant, before the esplanades and frowning artillery of the Tower; the short waves were squabbling and splashing, beneath the dark jaws and lowered portcullis of the traitor's gate, that fatal passage through which so many of the best and bravest of England's nobility had entered, never to return.

Brief as was the moment of their transit in front of that sad portal, Hunsdon had yet time to mark the terrible expression of misery, almost of despair, that gleamed across the features of the queen. She spoke not, but she wrung her hands with a sigh, that uttered volumes of repentance and regret, too late to be availing; and the stern old chamberlain, who felt his heart yearn at the sorrows of a mistress, whom he loved no less than he revered her, knew that the mute gesture, and the painful sigh were extorted from that masculine bosom, only by the extremity of anguish. She had not looked upon that "den of drunkards with the blood of princes," since it had been glutted with its last and noblest victim. Essex, the princely, the valiant, the generous, and the noble—Essex, the favorite of the people, the admired of men, the idol, the cherished idol, of Elizabeth, had gone, a few short moons before, through that abhorred gateway—had gone to die, had died by her unwilling mandate.—Bitter and long had been the struggle between her wounded pride, and her sincere affection; between her love for the man, and her wrath against the rebel; thrice had she signed the fatal warrant, and as often consigned it to the flames; and when at length her indignation prevailed, and she affixed her name to the fell scroll, which once executed she never smiled again, that indignation was excited not so much by the violence of his proceedings against her crown, as by his obstinate delay in claiming pity and pardon from an offended but indulgent mistress.

Onward! onward they went. The barge was at her moorings by the water-gate of Nottingham house, and the queen had made her way unannounced and almost unattended, to the sick chamber of the aged countess.

The sick woman had been for weeks wasting away beneath a slow and painful malady; her strength had failed her, and, for days, her end had been almost daily expected. Still, with that strange and unnatural tenacity,—through which the dying sometimes cling to earth, even after every rational hope of a day's prolonged existence has been extinguished—she had hovered as it were on the confines of life and death, the vital flame flickering like that of a lamp,—whose aliment has long since been exhausted,—fitfully playing about the wick, which can no longer support it. Her reason, which had been partially obscured during the latter period of her malady, had been restored to its full vigor, on the preceding evening; but the only fruit of its restoration was the utmost anguish of mental suffering, and conscientious remorse. From the moment when the messenger, whose arrival we have already witnessed, had been despatched on his nocturnal mission, she had passed the time in fearful struggles with the last foe, wrestling as it were bodily with the dark angel; now pleading with the Almighty, and adjuring him, by her sufferings, and by her very sins, to spare her yet a little while; now shrieking on the name of Elizabeth, and calling her, as she valued her soul's salvation, to make no long tarrying. In the opinion of the leeches, who watched around her pillow, and of the terrified preacher, who communed with his own heart and was still, her life was kept up only by this fierce and feverish excitement.

At a glance she recognized the queen, before another eye had marked her entrance. "Hah!" she groaned in deep sepulchral tones—"She is come, before whose coming my guilty soul had not the power to pass away! She is come, to witness the damnation of an immortal spirit! To hear a tale of sin and sorrow, that has no parallel! Hear my words, O queen, hear my words now—and laugh—laugh if you can—for by Him who made us both, and is now dealing with me according to my merits, never! never shall you laugh again! Hereafter you shall groan, and weep, and tremble, and curse yourself as I do!—Laugh, I say, Elizabeth of England, laugh now, or never laugh again!"

For a moment the spirit of the queen, manly and strong as it was, beyond perhaps all precedent, was fairly overcrowded, and cowed, by the fierce intensity of the dying woman's manner. Not long, however, could that proud soul quail to any created thing.

"Fore God, woman"—she cried—"thou art bewitched, or desperately wicked! What in the fiend's name mean ye?"

"In the fiend's name truly—for he alone inspired

me!—Look here—and then—pardon me, Elizabeth of England, in God's name, pardon me."

As she spoke, she held aloft, in her thin and bird-like fingers, a massive ring of gold, from which a sapphire of rare price gleamed brilliantly, casting a bright dancing speck of blue reflection upon her hollow, ghastly features. "Know you?"—she screamed—"this token?"

"Where got you it, woman? Speak, I say, speak! or I curse you! Where got you that same token?" The proud Queen shook and shuddered as she spoke, like one in an ague fit.

"Essex!"—sighed the dying countess through her set teeth—"the murdered Essex!"

"Murdered! God's death thou liest!—He was a traitor—done to death—Oh God! Oh God—I know not what I say!"—and a big tear-drop, the first in many a year, the first perhaps that ever had bedewed that iron cheek, slid slowly down the face of Elizabeth, and fell heavily on the brow of the glaring sufferer, who still held the ring aloft, in hands clasped close in attitude of supplication. "Speak"—she said again in milder accents—"speak, Nottingham, what of—of Essex?"

"That ring he gave to me, to bear it to thy footstool, and to pray a gracious mistress' favor to an erring, but a grateful, servant."

"And thou—woman—thou"—absolutely shrieked the Queen.

"Gave it not to thee—that Essex might die, not live"—was the steady reply—"Pardon me before I die—pardon me, as God shall pardon thee!"

"God shall not pardon me—woman—neither do I pardon thee! He—an he will—may pardon thee—but that will I do never! never! By the life of the Eternal, never!" and in the overpowering fury and agitation of the moment, she seized the dying sinner with an iron gripe, and shook her in the bed, till the ponderous fabric creaked and quivered. Not another word, not another sob passed the lips of the old countess—her frame was shaken by a mightier hand than that of the indignant Queen; a deep, harsh-rattle came from her chest, she raised one skinny arm aloft, and after the jaw had dropped, and the glaring eyeball fixed, that wretched limb stood erect, appealing, as it were, from a mortal, to an immortal judge.

The paroxysm was over. Speechless, and all but motionless, the miserable queen was borne by her attendants to the barge; the tide had shifted, and was still in their favor, though their course was altered. On their return, they again passed the triumphant fleet of Cavendish, bearing the mightiest sovereign of the world, the envied of all the earth, a wretched, feeble, heart-broken woman, grovelling, like a crushed worm, beneath the bitterest of human pangs, the agonies of self created and self merited misery. A few hours found her outstretched upon the floor of her chamber, giving way to anguish uncontrolled and uncontrollable. Refusing the earnest prayers of her women, and of her physicians, to suffer herself to be disrobed, and to recline upon her bed;—feeding on tears and groans alone;—uttering no sound but the name of Essex, in one plaintive, and oft-repeated cry;—mocking at all consolation;—acknowledging no comforter except despair;—ten long days and nights, she lingered thus in pangs a thousand times more intolerable than those which she had inflicted on her Scottish rival; and, when, at length, the council of the state assembled, in her last moments, around the death bed of a sovereign truly, and not metaphorically, lying in dust and ashes,—she named to them as her successor in the kingdom, the son of that same rival. Who shall say that the death of Mary Stuart went unavenged? H.

THE POLITICAL GRAMMAR OF THE UNITED STATES, 1 vol.—Harpers.—There is but one fault that we can discover in this work, upon a rapid glance at its contents. A political grammar should have been got up in a cheaper form, so that it could be disseminated—could be showered among the people. The only way upon which the great question of Reform can be carried is to drill the laboring classes thoroughly upon the rudiments of sound politics—upon the constitution itself. To facilitate such an object—to bring political instruction to the aid of political liberty—has been the object of the author of this volume, which he addresses, as a text book, to young men, either in private education or public reading. The intention is perfectly good, as far as it goes; but it might be bettered by reducing the size of the volume and striking off a new edition in the cheapest possible form. Let the people but have political light and political right will follow of a certainty. †

A TREATISE UPON THE PRACTICE OF THE COURT OF CHANCERY WITH AN APPENDIX OF FORMS; by MURRAY HOFFMAN, ESQ., in 2 vols. vol. 1., 8vo. New York: HALSTEAD & VOORHIES—1833.—In the hope of a review from an abler hand, we have delayed a notice of this work much too long; a circumstance, however, to which the author is probably quite indifferent, since the profession for whose use it was designed, have done it ample and substantial justice by adopting it as their guide in the very important branch of law of which it treats. It is not a disparagement of others to say, that as a learned chancery lawyer, its author has no superior in the country. His long experience and very extensive practice as a master, united with strong judgment, have given to his opinion on points of practice almost the weight and authority of judicial decisions. No man, therefore, could be better qualified for the important task which our author has undertaken, and which he has so well executed; and when his second volume is published it will supply what has long been much needed, a thorough guide to the Chancery lawyer. The volume before us gives evidence of great erudition, and the topics to which it relates are clearly and thoroughly treated. Altho' the work is chiefly of a technical character, yet the general reader will find in the introduction and first chapter a very interesting outline of the history of the Court of Chancery in this State, and of its present condition. In reference to the great ends attained by this Court, the author remarks, with equal eloquence and truth, that "no code of law, no code of jurisprudence, from the crude institutions of barbaric ignorance, to the scientific compilations of modern knowledge, exhibits a system of such pure morality, so consistent with the dictates of a sound, unbiassed reason; so founded upon the everlasting principles of truth; so righteous and so wise. The doctrines of the Court of Equity are the most unrestrained productions of the morality and intellect of man, directed to the regulation of his civil duties, that the world has yet known."—The Annals of the Court of Chancery are of great interest, and its mutations from the most corrupt to the purest tribunal of England, as set forth in Parkes' History of the Court of Chancery, form a striking contrast with its progress in this country, where it has long and purely subserved the best purposes, though even now embarrassed by its immense accumulation of business. To the numerous class interested in its practice, this work will prove an invaluable auxiliary.

Our editorial table, somehow or other, does not exhibit it wanted supply of new publications to-day. But, in lieu of other matter, our readers will not quarrel with us for citing here some extremely interesting passages relating to the life of Mirabeau, which we find given in the number of Blackwood which came last to hand, as entirely original. †

He was born in 1764, and came into the world with such an enormous head, that the first words his father heard when his infant was brought to him was, "Don't be frightened!" At the age of three years, the child had the small-pox, which so disfigured and cicatrized his face, that his father writes to his brother, "Your nephew is as ugly as Satan." At the age of seven, he received confirmation; and it was on that occasion, that he made the singular remark for a child, reported by himself: "It was explained to me that God could not make contradictions; for instance, a stick with only one end. I asked, if a miracle was not a stick with one end. My grandmother never forgave me." Even before this period, the severities of his father towards him began; we find him on all occasions urging his tutor to harshness and rigor: yet he seems, even from his earlier years, to have discovered his wonderful faculties: indeed, his *bon mots* would do honor to a grown man. His father writes, "My son grows fast, his prattle increases, and his face grows uglier every day; he is the ugliest and the wittiest. His mother had been talking to him of his future wife; he replied, he hoped she would not judge him by his face. What should she judge you by then, said his mother. The inside

will help the outside, was his reply." We find another anecdote, a little posterior, which is quite in character with those sudden bursts of nobleness, which throw a splendor on, and, in some measure, redeemed his after career. "The other day," says his father, in a letter to his uncle, "he gained a prize; it was a hat, and turning towards a youth present, who had only a cap, and putting the hat on his head, 'Here take it,' said he, 'I have not two heads.' He seemed to me then the emperor of the world. His attitude had something divine; I wept and pondered, and the lesson was to me very good."

Perhaps no child in his infancy ever showed in so remarkable a degree what he would be as a man, as did Mirabeau. The following sentences from his father's letters would seem sometimes to describe the man. In one place the Marquis says, "he has a mind all athwart, fantastic, tumultuous, unmanageable, and tending to vice, even before he knows what it is." In another place, "the imp has a haughty heart under the jacket of a child, a strange instinct of pride, noble nevertheless; an embryo ambition that would swallow the whole world, before it is twelve years old." Again, "he has an intelligence, a memory, a capacity, altogether astonishing; but I know, from the physical conformation of such characters, that there is no making any thing of them; to brutal appetites they will return, and carry them to excess; and as pride never abandons them, even on the wheel, they will make themselves base with the base, vain with the vain, fierce with the fierce; and even pique themselves on surpassing the very hogs; there are excrements in all races." So atrociously does this man express himself when writing of his son, and yet it is impossible to deny him a profound penetration into human nature.

JENNING'S LANDSCAPE ANNUAL—GRENADA.—This costly publication, shown us, among several others of the same kind by Mr. Colman this morning, is so far beyond all of its class in beauty and interest, that we would recommend every person of taste a peep into it. It consists wholly of Moorish Views in Grenada, from drawings by David Roberts, illustrated by Thomas Roscoe.

The American Turf Register and Sporting Magazine, for November, contains its usual variety of matter, and is embellished with a plate, and contains a memoir of the celebrated imported Horse Messenger.

FOREIGN INTELLIGENCE.

TEN DAYS LATER FROM EUROPE.—By the packet ship *Caledonia*, Capt. GRAHAM, arrived on Sunday in 26 days from Liverpool, we have London dates of the 20th and Liverpool of the 21st, inclusive. They contain very little political news of interest.

By this arrival we have the calamitous intelligence of the destruction of five of the buildings in which the two houses of the British Parliament have for ages been accustomed to assemble. The occurrence is attributed altogether to accident, but it very naturally excited the greatest sensation in London. The loss of the buildings, as architectural productions, are not lamented—for they were both paltry in style, inconvenient in their arrangements, and in every way but little creditable to the national taste; but there were ancient and powerful associations connected with these dusky halls that would render it impossible to contemplate their ruins without emotion. "Here," says Bell's Messenger, "within these walls the most memorable of freedom's battles were fought—here the Great Charter of English liberty was first unfolded for the protection of the people—and here a humble member of the House of Commons—Hampden—dared to brave the power of a royal despot. Within the now bare, blackened, and roofless walls of St. Stephen's Chapel did William Rufus, with the nobles of his court, prostrate himself in prayer, and Edward III. gave to heaven those which were not devoted to the happiness of his subjects. The House of Lords too—the first Legislative chamber in the world—was not without a host of recollections which rendered it an object of venerable respect in the eyes of the country. Here stood ELIZABETH, in all the pride of regal triumph, announcing the destruction of the Spanish Armada—whose foundering fleet formed the never-to-be-forgotten needle work decoration of the lofty walls;—here WILLIAM III. gave the Bill of

Rights to Englishmen;—and here the final words were spoken which gave toleration to the Dissenter, emancipation to the Catholic, and freedom to the slave."

Other journals, though they unite in lamenting the loss of public Records, which is said to be great and irreparable, rejoice in the destruction of "these ugly, dark, inconvenient and unhealthy buildings;" and seem busied alone in devising some new place for Parliament to assemble in. The King it seems, in his good-natured off-hand way, has offered his new palace, but the people want his Majesty to keep this costly toy, and let them have the old palace of St. James. The injury done by the fire, apart from the destruction of invaluable documents, is estimated at half a million sterling.

One of the precious and irreparable relics, which has perished with the House of Lords, is the splendid tapestry which recorded the great achievement from which the rise of the naval glory of England is to be dated—the defeat of the Spanish Armada. That tapestry was executed by the celebrated Francis Spiering, from designs by Cornelius Vroom, and originally belonged to the Earl of Effingham, the Lord High Admiral of England, and Commander in Chief of the gallant little fleet that swept the colossal Armada from the seas. It was purchased of the Lord High Admiral by James I., but was not put up in the House of Lords until the Commonwealth, two years after Charles, I. had been brought to the scaffold. The room in which it was originally hung was a smaller room than that which it lately ornamented, and where it was not placed until 1800, the House of Lords having met before the union with Ireland in a room not so large or commodious as that which it has occupied ever since that event, was formerly the Court of Requests. At that time also considerable alterations were made in the House of Commons, in consequence of the accession of a hundred new members.

BURNING OF THE HOUSES OF PARLIAMENT.—Between 6 and 7 o'clock on the evening of the 16th October, a fire burst out from one of the apartments connected with the House of Lords: the burning spread with fearful rapidity, and soon consumed the Houses of Lords and Commons, the Library of the latter, many of the Committee Rooms, the Painted Chamber, and a number of other offices. The house of Mr. Ley, Clerk of the Commons, and all the habitations situated between the Lord's Journal Office, and the Speaker's house, with the greater part of the Speaker's house itself were burnt. The conflagration ultimately extended all round the new front buildings of the Lords, utterly consuming the rooms of the Lord Chancellor, Mr. Courtney, and the other office ranging round to Hayes' Coffee-house. Bellamy's kitchen and rooms are destroyed, Westminster Hall is saved: and the Courts of Law have escaped, though their roofs were stripped off and water poured in by the engines. Westminster Abbey was untouched, the wind having blown from the S. W. and West. Great exertions were made to preserve papers, records, and books from the Libraries; but as yet it is impossible to say what is the extent of the damage.

The following is the Official Report upon the damage done to the buildings, furniture, &c. of the two Houses of Parliament, the Speaker's official residence, the official residence of the Clerk of the House of Commons, and to the Courts of Law at Westminster Hall, occasioned by the fire on the 16th day of October, 1834, as far as can at present be ascertained.

House of Peers.—The House Robing Rooms, Committee Rooms in the west front, and the rooms of the resident officers, and the Octagon Tower at the south end of the building—totally destroyed.

The Painted Chamber—totally destroyed.

The north end of the Royal Gallery abutting on the Painted Chamber—destroyed from the door leading to the Painted Chamber as far as the first compartment of columns.

The Library and the adjoining rooms, which are now undergoing alterations, as well as the Parliament Offices and the Offices of the Lord Great Chamberlain, together with the Committee Rooms, Housekeeper's Apartments, &c. in this part of the building are saved.

House of Commons.—The House, Libraries, Committee Rooms, Housekeeper's apartments, &c. are totally destroyed (excepting the Committee Rooms, Nos. 11, 12, 13 and 14, which are capable of being repaired.)

The official residence of Mr. Ley (Clerk of the House)—this building is totally destroyed.

The official residence of the Speaker.—The State Drawing Room under the House of Commons is much damaged, but capable of restoration.

All the rooms from the oriel window to the south side of the House of Commons are destroyed.

The Levee Rooms and other parts of the building, together with the public galleries and part of the Cloisters, very much damaged.

The Courts of Law.—These buildings will require some restoration.

Westminster Hall.—No damage has been done to this building.

Furniture.—The furniture, fixtures, and fittings to both the Houses of Lords and Commons, with the Committee Rooms belonging thereto, is, with few exceptions, destroyed. The public furniture at the Speaker's house is in great part destroyed.

The Courts of Law.—The furniture generally of these buildings has sustained considerable damage.

The strictest inquiry is in progress as to the cause of this calamity, but there is not the slightest reason to suppose that it has arisen from any other than accidental causes.

Office of Woods, &c., 17th October, 1834.

A FIRE at Liverpool on the 10th ult. which broke out in the extensive warehouse in Lawnclet's-hey, in the warehouse of Thomas Dover & Co. and in its progress, burnt 1500 bales of cotton, 900 hhds. of sugar, and 150 hhds of molasses. Loss estimated at 40,000l, partly insured. Most of the cotton belonging to Sands, Hodson, Turner & Co. and Robert Wilson.

Mr. Livingston had returned to Paris, and in reply to a report, that "in order to put an end to the question of claims between the two Governments, and to counteract the possibility of new obstacles on the part of the Chamber, the Cabinet of Washington will reduce its claims by one-third." The Paris Constitutional of Oct. 14, states that "it has been authorized by Mr. Livingston, the American Minister, to declare that he has received no instructions from the Government of the United States to agree to any compromise whatever, relative to the 25,000,000 claimed of France, and further, that Mr. Livingston is sure no such instructions will ever be transmitted to him."

Accounts from Madrid bring the conclusion relative to the exclusion of Don Carlos and his progeny from the right of succession to the throne of Spain. The project of law presented by the government on this subject has been unanimously approved of by the Chamber of Procuradores.

Munich accounts states that the negotiations for the marriage of Queen Donna Maria, of Portugal with Augustus, Duke of Leuchtenburg are finally concluded.

PORTSMOUTH, OCT. 18.—This morning the Soho steamer, Capt. Fraser, arrived from Lisbon, having left on Sunday last, at 4 A. M. She brought letters from Oporto, where she stayed four hours, and from Vigo, at which place she was fourteen hours.

A deep and general feeling of regret was becoming very prevalent, both in Lisbon and Oporto, at the death of Don Pedro, it being believed that he was really sincere in his determination to carry on all necessary reforms in the spirit of the charter; which it is much feared Donna Maria will not do, under the tutelage of Tapia and Palmella, who are secretly disciples of the old Absolute school. The Duke of Palmella is the most intimate confidant and adviser of the young Queen. The country continued in a tranquil state. The army was so well disposed towards the present state of the Government, that not the slightest apprehension of disaffection existed, should Don Miguel make the rash attempt again to enter the country. The harvest had been abundant.

There was no later news in Paris from Madrid, than the 9th.

The packet ship Europe, A. C. Marshal, arrived at Liverpool on the 19th September, having the remarkable short passage of 17 days from this port.

Extract of a letter from Zara, dated August 29:—"The Austrian commercial brig *Ciro*, in her passage from Venice, observed on the 10th instant, before

sunrise, a ship in flames to the southeast of Scoglio Saniago. Her captain immediately made all sail for the unfortunate object, and arrived in time to receive the crew, consisting of ten men. She proved to be the American brig Ontario, bound from Mobile, North America, to Trieste. She had been struck with lightning, and the flames spread with such rapidity that it was impossible to overcome them. The crew conveyed the crew to the island of Lessina, where the authorities supplied them with the means of proceeding to Trieste.

The Revenue Accounts of England present a decrease on the last quarter, as compared with the corresponding one of last year, of £330,064. The result for the year exhibits an increase of £313,448, as compared with the previous one. This arises principally from the Customs.

The rate of postage on foreign papers has been reduced in England to a moderate sum, so that American newspapers may now be sent there without incurring an unreasonable charge.

A new bridge is about to be erected across the Thames, from the Lambeth to the Westminster side of the river, near the Mill-bank Penitentiary.

The gallant and the spirited Duchess d'Angoulême, whom Bonaparte pronounced to be the only "man" in the Bourbons family, is at present in Hungary. She was at Offen on the 24th of September. Her husband and father-in-law remain in Bohemia.

The Polish inhabitants still suffer from the persecution of the Government. Their torments under the new Minister of the Interior, M. de Rohow, instead of diminishing as they had been led to hope, have been increased. Many persons have been arrested, and put into close confinement. Among them are M. Eugene Sycaniecki and M. Joseph Mikorski, who had been married only a few days. The only crime, it is said, of which they are accused is their having sent relief to some of their unfortunate countrymen in foreign lands.

A letter from Algiers, dated 27th ult., announces the arrival of Mr. Thomas Campbell, author of "The Pleasures of Hope," &c., in that colony.

Mexico.—An arrival at Philadelphia, from Vera Cruz, brings intelligence from Mexico to the 17th of October. Tranquillity continues to prevail throughout the country—but it is the quiet of a despotism, and no one can calculate its termination.—A decided opposition to the government already begins to manifest itself; but it seems it has as yet made but little head.

According to the Censor of Vera Cruz of the 6th October, it would appear that a few prisoners of State had been released from the fortress of San Juan de Ulloa, and among the number were the distinguished Senators, Alpuche and Cusco.

Many distinguished patriots who, trusting to the promises of the Santanistas, with regard to the preservation of free institutions, had remained neutral during the last disturbances, being now unwilling to submit to a political and religious system of intolerance, had also left the country. The Ex-Vice-President Fariñas, after having been exposed to the grossest insults from an excited mob, during his journey from Mexico to Tampico, had embarked for New Orleans.

The President had made several important nominations in the various branches of the administration, removing from their situations those individuals suspected of devotion to the late federal government.

SUMMARY.

The second Session of the 23d Congress commences two weeks from next Monday. Some of the members are already on their way to the Capital, or have arrived there.

A letter received in Boston, from Marseilles, announces the death of George B. Adams, Esq. United States Consul at Alicante, Spain, Sept. 10. Mr. Adams was a native of Boston, but had resided in Spain for the last eighteen years.

The Governor of Georgia, in his Message to the Legislature, states, that the aggregate amount of the sales of negroes belonging to that State, is one hundred and eighteen thousand one hundred and forty-eight dollars.

The Norfolk Beacon says:—The Lynchburg Virginian describes an extensive cotton factory to be

erected in that town; and regards it as the commencement of a new era in that vicinity. We wish success to the undertaking.

Buenos Ayres Steamboat.—The Alexandria Gazette of Saturday says:

"We learn that the steamboat Potomac, formerly running between this place and Norfolk, has been purchased by the Buenos Ayres Steamboat Company of Boston. It is intended to run her between Buenos Ayres and Monte Viedo, and she is to be commanded by Capt. Richard Sutton, formerly of the Marco Bozzaris. The Potomac is now undergoing repairs, and is expected to sail about the 1st of December."

Capt. Sutton has the exclusive steam navigation granted him, by the Legislature of Buenos Ayres, of the river Plata for ten years, and we trust he will make it a valuable mode of travelling between the two cities, and a profitable one to himself, and the owners of the boat.—[Com. Adv.]

Steam-ship Connecticut.—Yesterday afternoon a number of underwriters and others visited, by invitation, this vessel. All were highly gratified, and we have no doubt from the remarks of those on board, that steam vessels navigating the sea will hereafter be taken at the same risk, by insurance companies, as merchant vessels. The Connecticut is copper fastened and newly coppered, and in every respect completely fitted for her intended station, and being substantially planked up under the guards renders her additionally safe as a sea boat. She leaves hence positively on Tuesday, the 18th instant, and has superior accommodations for 100 passengers, about 50 having already taken berths. Her boilers, piston, machinery, &c., are in perfect order; and that no detention for want of fuel may occur, a vessel has already sailed for Key West with a supply of coal for her in case of need. There have been no pains spared to render the Connecticut every way calculated for the trade she is intended for, and we hope her trips between New Orleans, Metamoras and Tampico will equal the most sanguine expectations of her enterprising owners. She is to be commanded by Captain Meore, a well known and experienced shipmaster.—[Gazette.]

We listened with much interest to a sermon delivered before the New-York Young Men's Temperance Society, at the brick Church on Sunday week last, by Rev. Dr. Spring. The house was filled at an early hour, and it was with difficulty that all could be accommodated with seats. Although so much has been said upon the subject of Temperance, yet the Doctor threw around it such an interest as to rivet the attention of his hearers. He observed that there were now in the United States seven thousand Temperance Societies, embracing one million two hundred thousand members.—[Com. Adv.]

Col. White, the Delegate in Congress from Florida, who is now in Europe, has written home that the capitalists of England are turning their attention to the establishment of a direct trade from London and Liverpool, to the Florida ports. He mentions one line of vessels already projected to St. Marks and Pensacola, and one to Apalachicola. There is no doubt that the interest of the planters in Florida, Georgia, Alabama, and other States that have access to the ports of the Gulf of Mexico, would be largely benefited by direct and regular intercourse with Great Britain. Mobile offers inducements of the highest order, and is destined to support a very extensive and constantly increasing commerce.—[Mobile Register.]

REV. MR. MORTIMER.—We cannot refrain from an expression of sympathy with our Moravian brethren, on the loss of their excellent and venerable minister, the Rev. Benjamin Mortimer, who expired on Monday, the 10th instant, after a short but painful illness, in the 67th year of his age. Mr. Mortimer came to this country from England, in the year 1791. After filling the station of teacher of the United Brethren at Nazareth Hall, Pennsylvania, he commenced his missionary labors among the Indians of this country, which he continued, without intermission, for a period of fourteen years. In 1812 he was called to the Pastoral care of the United Brethren in this city, in which station he remained for seventeen years, in the faithful and affectionate discharge of his duties. The few remaining years of his life he spent in retirement, enjoying the affectionate esteem of a numerous circle of friends of all denominations. He departed this life in humble reliance on the merits of his Saviour, and leaves a deeply afflicted family to mourn his loss.—[Churchman.]

Six of the Nuns of the Charlestown Convent, have joined the Ursuline Nunnery in Quebec.

Great Emigration to the West.—The following extracts, one from the Miami of the Lakes, published in Perryburg, (Ohio) dated October 21st, another from the St. Louis Republican of October 17th, and a third from an interior town of Missouri, will give our readers some notion of the emigration to the West.

"The number that arrive and depart daily from our town, for the purpose of locating in the valley, is almost incredible. A wag at our elbow, while we were standing upon the porch of one of our public houses in this place, remarked, as we stood gazing at the long train of covered wagons, as they came pouring into the town, that he verily believed 'the whole East had broken up.' And well indeed he might suppose so, as the spectacle certainly justified the belief. To the farmer in the East, who wishes to better his fortune by emigration, we say, the Valley of Miami is the place for you; near a good and never failing market, and as productive a soil as any part of the West can boast of. In addition to the above, we add that a more delightful region we were never in."—[Miami of the Lake.]

The census just taken shows a population in Detroit of 4910.

The Editor of the New Orleans Advertiser incidentally remarks:—

"The most permanent population of our city does not exceed 50,000, from which deduct 30,000 colored, which will leave a white population of 20,000. Of these we may say 15,000 are Catholics, and 5,000 Protestants—and of these again there are at least 6,000 communicants of the first denomination, and 600 of the latter. There are in all 6 Catholic churches and chapels, attended by, as far as we can learn, 20 priests; 10 Protestant churches, attended by 7 clergymen. The usual estimate, for most religious countries, is, we believe, a church for every 1000 inhabitants."

Business of Franklin, Mass.—It is stated that in the town (or township) of Franklin near Wrentham, Mass. containing a population of about 1,700 persons, the value of the straw hats manufactured by the females is between 75,000 and 80,000 dollars a year.

Dividend.—The Aetna Insurance Company have declared a dividend of four per cent. for the last six months, payable on the 15th inst.

On the late re-organization of the marine corps, eight or ten lieutenants were to be appointed, for which stations there were three or four hundred applicants.

The Rev. Doctor Ludlow, of Albany, has received and accepted a call to the Presidency of the University of Pennsylvania. The departure of this estimable man and distinguished divine, is a source of much regret among the Albanians.

A run upon the Quebec Bank has taken place, and was not over at the last accounts. The Montreal Bank has also been a sufferer by the same operation. In three days the latter has paid out £12,000 in specie. The bills of that Bank are passing for goods at 5s. 2d. and 5s. 6d. only.

[From the Norfolk Beacon.]

We are authorized to state that the Rev. Dr. Duchet has resigned the Rectorship of Christ Church in this borough, and accepted the invitation to the Rectorship of St. Stephens Church in the city of Philadelphia, vacated recently by the death of the Rev. Dr. Montgomery.

The gallopade of Meteors, which kicked up such a flurry in the heavens last autumn, has it seems, been repeated this year upon the anniversary of the first dance. This occasion was anticipated by Professor Olmstead of Yale College and other scientific men. The Professor, who witnessed the phenomenon, assisted by Mr. Loomis, a teacher in the college, and Mr. Haile, a member of the senior class, says that the presence of the moon permitted only the larger and more splendid meteors to be seen. The number of them, though smaller than that of last year, was much above the common average. They began to be frequent as early as four minutes past 1 o'clock, when a fire ball of unusual splendor blazed forth as a signal. From this period they continued to fall at a pretty uniform rate until daylight was far advanced. They estimated that a thousand fell during the night. Their directions were more remarkable than their number, and afforded more unequivocal evidence of the identity of the phenomenon with that of last year. They appeared as 'fore, to radiate from a common centre, and that it was again in the Constellation of Leo.

"In more externals the Chippewas are not essentially different from other tribes of the Algonquin stock in the Western country. And the points in which a difference holds may be supposed to have been, for the most part, the effects of a more ungenial climate. They are, to a less extent than most of the tribes, cultivators of the soil, and more exclusively hunters and warriors. Living in a portion of the continent remarkable for the number of its large and small lakes, they find a common resource in fish, and along with this enjoy the advantage of reaping the wild rice. Their government has been deemed a paradox, at the same time exercising, and too feeble to exercise, power. But it is not more paradoxical than all patriarchal governments, which have their tie in filial affection, and owe their weakness to versatility of opinion. War and other public calamities bring them together, while prosperity drives them apart. They rally on public danger with wonderful facility, and they disperse with equal quickness. All their efforts are of the partisan, popular kind; and if these do not succeed they are despirited. There is nothing in their institutions and resources suited for long-continued, steady exertion. The most striking trait in their moral history is the institution of the Totem—a sign manual, by which the affiliation of families is traced, agreeing more exactly, perhaps, than has been supposed with the armorial bearings of the feudal ages; and this institution is kept up with a feeling of importance which it is difficult to account for. An Indian, as is well known, will tell his specific name with great reluctance, but his generic or family name, in other words, his Totem, he will declare without hesitation, and with an evident feeling of pride. None of our tribes have proceeded farther than the first rude steps in hieroglyphic writing; and it is a practice in which the Chippewas are peculiarly expert. No part of their country can be visited without bringing this trait into prominent notice. Every path has its blazed and figured trees, conveying intelligence to all who pass, for all can read and understand these signs. They are taught to the young as carefully as our alphabet, with the distinction, however, that hieroglyphic writing is the prerogative of the males. These devices are often traced on sheets of birch-bark attached to poles. They are traced on war clubs, or canoe paddles, bows, or gun stocks. They are often drawn on skins, particularly those used as back dresses by warriors. They have also other hieroglyphic modes of communicating information, by poles with knots of grass attached to them, or rings of paint, and often antlers, or animal heads suspended by the banks of rivers.—[School-craft's last work.]

FOREIGN VARIETIES.

THE LORD CHANCELLOR'S LECTURES.—Interchange—Restrictions.—That production may take place in two different ways,—either as the immediate fruit of native industry, or as something obtained from abroad in exchange for that,—and that what ever tends to direct production and exchange into other channels than those into which they fall when left free and unimpeded causes the industry of the community to be employed to less advantage than it would otherwise be, being once established, it becomes a necessary branch of the inquiry to examine the effects of a system of bounties and prohibitions.

In the least hurtful shape in which bounties and prohibitions can be applied, setting aside the expense of superintendence, they merely occasion a transfer of property, as it were, from the right hand to the left, as if, supposing a pair of shoes and a pair of stockings to be purchased at 5s. each, and government should allow a bounty of 2s. 6d. upon the one, and impose a duty of 2s. and 6d. upon the other. Ten shillings, it is plain, would procure one pair of each; but the maker of the shoes, being enabled by means of the bounty to produce them at half the former cost, would afford to sell them at 2s. 6d., while the maker of stockings, unable to produce them at less than the former cost, must add the 2s. 6d. to their former price, and would not sell them for less than 7s. 6d. Bounties in this country have been mostly applied to the encouragement of the fisheries, not so much with a view to make fish and oil cheap as for the improvement of the shipping interest. This plea I shall examine by and by, merely remarking at present, that if a larger quantity of labor and capital is thus forced in one direction than would naturally flow into it, a loss is occasioned to the community, and if such larger quantity of labor and capital is not so forced in that direction, then the shipping interest is no better with the bounty than without it, and consequently the money is wasted.

Such being the operation of bounties and prohibitions upon the products of the same country, let us see what are their effects when applied to the transactions of one country with another. Admitting that it is desirable to have commodities at as little cost as possible, and admitting also, as has been fully proved, that no commodities will be imported from abroad except they can be obtained at less cost than at home, it must follow, that in whatever degree the business of production and exchange are turned out of the course which they would naturally take, in the same degree the advantages arising from production and exchange are sacrificed, or at least postponed, to something else. Whether there is anything for which they ought to be so postponed is a consideration not for political economy, but for politics.

Let us suppose that linens might be manufactured on the continent as cheaply as in this country—say at 30d. per yard, but that our government, desirous of encouraging the home manufacture, granted a bounty of 2d. a yard upon exportation. The effect would be, that the French would cease to manufacture linen because they could obtain it from us for 28d., and they might employ the capital thus withdrawn to the production of silk, and England would be paying the expense of transport both upon the linen she exported and the silk she might take in exchange. Thus her means of enjoyment would be diminished. The false reasoning which has led to these equally false principles of foreign trade is, that an increase of production in some particular commodity must be a benefit to the country. Thus the grower of corn or the manufacturer of silk may have persuaded the imposition of restrictions in his favor, because by them he might be enabled to grow more corn or to produce more silk. But the true light in which to view such application would be as to their effect upon the interest of the community at large.

With respect to one great argument in favor of the continuance of bounties and prohibitions—namely, that their withdrawal would occasion great distress—it may be observed, that what is thus lost in one direction is often gained in another. If the withdrawal of the bounty upon the manufacture of silk should cause it to go over to France, it would most likely occasion a rise in the demand for cotton to supply the French. To plead, however, as a barrier to all change, that it would produce distress to individuals, is to put a stop at once to all the talking and writing about the general happiness,—to argue that all alteration, all improvement ought to be prohibited; for what are the events in which the interests of some individuals do not require to be sacrificed? In introducing salutary reforms it is certainly desirable that as little injury should be inflicted as possible, but whenever they appear to stand in competition, it would be contrary to all the rules of enlightened legislation and true morality to sacrifice the greater interest to the less.

A bounty to one portion of the community is necessarily attended with a prohibition to the remainder. Now the granting of a right can never be justified unless the good conferred by it is more than equivalent to the corresponding evil. There is no subject upon which the policy of the restrictive and prohibitive system has been maintained with more obstinacy and sophistry than that of corn. Corn, however, will no longer be imported from abroad than it is cheaper for the community to do so; and if it is right that the community should have the benefit of this cheaper production in other commodities, why should it be denied them in one where, from the greater consumption, the advantage is likely to be of greater importance? Two reasons alleged by the advocates for restriction, which I did not notice in a former lecture, are, first, the power which we should put into the hands of other nations, by giving them the supply of our markets with the first necessities of life, of reducing us at any time to extremities; secondly, the injustice of denying to farmers and landlords a similar monopoly to that which is in certain cases enjoyed by merchants and manufacturers. As to the first of these arguments, it is by no means established that war would stop our supplies of corn, as was evidenced in the late war, which was perhaps more general, more protracted, and conducted with stronger feelings of animosity than any on the records of history; nor is it yet certain that the country supplying the corn is not almost as dependent upon the other country for a vent for its produce as the purchasing country is for a supply. Besides, if this is to be admitted as a valid reason against the importation of corn, it may be admitted as a valid reason against foreign commerce altogether. The most consolatory conclusion to which the true theory of foreign commerce has

given birth is, that nations have an interest in loving one another. Instead of providing against the effects of war by making ourselves independent of other nations, it should be our study, by extending our relations and our concerns with them, to engage their interests in the endeavor to prevent it. With respect to the second argument, it is to be observed, that if it is good for the producers of corn, it is good for every other species of producers whatever; and it moreover supposes some peculiar gain to the merchant and the manufacturer out of the monopoly, and a corresponding evil to the grower of corn, in neither of which suppositions is there the shadow of truth.

Talleyrand.—We have received a book, called the *Life of Prince Talleyrand*, accompanied with a portrait. We have not read it through, but the pages we have read have filled us with disgust.—Theft, the most heartless seduction, murder, and infamous treachery, are amongst the crimes laid to the charge of the eminent person whose history this professes to be. If he have been guilty of these various offences, compared to him the most depraved villains who have expiated their crimes on the gallows—the Burks and the Bishops of our times—are poor contemptible drivellers in iniquity. It is not possible that French society, bad as it was before the revolution, could have tolerated such a monster, and it is not possible, if only the tenth part of the crimes here attributed to the person named were true, or possessed the shadow of credibility, that he could be received at this day into any society. All men and all women must shrink from him with instinctive horror, as they shrink from death. If the stories here told be not true, the inventor or compiler of them is more depraved than the individual he describes. In either case it is a disgrace to our literary men that such a work should have found a translator. Our readers, remembering the testimony to Talleyrand's character, borne as well by the Duke of Wellington as Earl Grey, cannot fail to be aware of the caution with which such scandalous anecdotes as those which this book contains ought to be received.—*Courier*. [From the little we have read of the book we are inclined to concur in the judgment which the *Courier* pronounces upon it. It professes to be "neither libel nor panegyric," but the gross caricature which faces the title page, and which purports to be a portrait of Talleyrand, is sufficient to rouse the suspicions of every one that the work is not so free from libel as from panegyric.]

The Duke of Wellington's demand of 20,000*l.*, alleged to be due to him for arrears of pay, as Inspector General of the Belgium fortresses, has been refused by the Minister of War, on the ground that his Grace has no claim on the present Government of Belgium, never having been recognized as holding any commission and appointment under Leopold; urging, that had such sum been due to the "Chief of the Holy Alliance," his demand should have been made on the Government of William of Holland, and not on the Belgian Treasury.

In the year 1792 the fatal effects of the system of imprisonment for debt were first pointed out by a committee of the House of Commons, of which Mr. Burke and Mr. Fox were members. The report states that there were in prison 1,957 prisoners, 1,803 wives, and 4,088 children. That for debts under £20 the law charges were £9,250, and the sums received £1,948; and for these debts under £20 there were 610 prisoners, some of whom had been imprisoned nine years for £410, and that a woman had died in Horsham gaol, after having been imprisoned forty five years for £19.

On the important subject of poor laws in Ireland, the *Quarterly Review* has the following striking remarks:—"A little more delay, and the great agitator will step in, and, with a transition which to him is easy and natural, will declare himself the advocate of a poor law; and, by forcing it on an unwilling government, secure to himself all the credit and gratitude that must spring from its concession, and thus seat himself more firmly in the hearts and affections of the Irish people. If the government wish to give permanence to the dangerous power which that individual now wields, they cannot take a more direct course than by allowing him this last and greatest advantage over them. While he is yet professedly hostile to it, they might, if not as deficient in decision as in policy, by coming forward with this great measure of practical relief to the mass of the Irish people, alienate them from the agitator and his plots, and win their regard and affections for British connection and the imperial

gielature. Will they let the moment go by which must determine the destinies of Ireland, perhaps of Britain likewise?"

Saandham.—"Immortalized by an extraordinary circumstance, Saandham, among foreigners, has unaccountably changed its name to Saardham, probably in compliment to the czar carpenter! The aspect it offers, when approached by Beverwyck, is as singular as the fact which made it so renowned. On a space of less than two leagues, without trees or hills, are crowded 2000 mills, some of which are of a prodigious height. In casting the eye over this moving forest, you behold, at short distances, small standards and flags of different colors, fixed on the tops of houses, with garlands of flowers and ribands interlaced on the wings of the mills whirling in their circuit, while crowns of the most brilliant hues, suspended at the extremities of their sails, describe all larger circles. This is the way by which the Saandhamites announce their marriages; each flag indicates a nuptial, and every mill belonging to the families of the *nouveaux mariés* carries the same trophies. The aristocratic miller, by this means, exhibits his wealth, and attracts his clients and friends. On the same horizon, and in the middle of this joy, the fixed wings of other mills show the deaths of their proprietors."—[Gordon's Belgium.]

Discrimination.—Mr. Baron Bolland, in the course of his evidence in the great will cause at Lancaster, stated, as a proof of Mr. Maraden's sanity, that he, the learned baron, had sent him a volume of his own poems, "which he would not have done, had he conceived him to be a man of inferior intellect." Were Mr. Hazelwood still living, what an additional feather would this be in the cap of the Roxburg club.

On Tuesday week a foot-race took place on Kersal-moor, between the two celebrated jumpers, Benjamin Hart and the "Mountain Stag," for £30 a-side. The distance was 200 yards, and they were to start on the signal of a pistol, which twice missed fire, by which two false starts were made. The third time the "Mountain Stag" got the start by about a yard; Hart, however, recovered this advantage before they got half the distance, and won cleverly by four or five yards, in the astonishing short space of twenty-one seconds. The betting at starting was 5 to 4 on Hart.—[Manchester Courier.]

Utility of knowing English.—There is a story of an adventure happening to a poor Highlander from not being well acquainted with the English language. He came up to London, and was greatly distressed for want of victuals. One day, seeing a person with a friendly expression of countenance, he stated to him his lamentable case. The man asked him why he did not go to the shop of a penny cook, where it is usual for poor people to get food. It is here necessary to state, that in these shops poor people giving a couple of pence, get a piece of bread, a portion of meat, and half a seer of beer or barley water; this kind of shop is called a penny cook's. The Highlander, forgetting the name penny cook, from his ignorance of the language, thought it was *penny cut*, and going further on, he asked where the penny cut shop was. A man (whom he addressed) thought that he wanted to get either his hair cut or to be shaved, and pointed out a barber's shop. The Highlander, going to the shop knocked at the door, and was admitted by the barber, who seated him on a chair. The tonsor then filled an ewer with hot water, put a lump of soap into it, and making a lather, placed it on the table before the Highlander, and went up stairs for his razors and other shaving apparatus. The Highlander, taking the soapsuds water for broth, began to drink it, and swallowed three mouthfuls; and mistaking the lump of soap for a potato, and being exceedingly hungry, he chewed and ate it. Up on the barber's coming down stairs, and seeing what had happened, he was petrified with astonishment. The Highlander taking two pence from his pocket, laid them on the table, saying, "I am much obliged to you; the broth was very good, but the potato was not sufficiently boiled."—[Old Magazine.]

Local Proverbs.—In the Isle of Man a proverbial expression forcibly indicates the object constantly occupying the minds of the inhabitants. The two deameters, or judges, when appointed to the chair of judgment, declare they will render justice between man and man as "equally as the herring-bone lies between the two sides;" an image which could not have occurred to any people unaccustomed to the herring fishery. There is a Cornish proverb: "Those who will not be ruled by the rudder must be ruled by the rock;" the strands of Cornwall, so often covered with wrecks, could not fail to impress on the imagination of its inhabitants the two objects

from whence they drew this salutary proverb against obstinate wrong heads.—[D. Israeli's Curiosities of Literature.]

Morning Calls.—"The ancient custom of *bon-homme*, paying visits on the first day of the year to your friends and acquaintances, is still kept up at Brussels with great precision. At an early hour, when light is visible, the whole genteel male population of the city is in movement, and every carriage and horse in requisition for the occasion. The pedestrians may be seen crossing each other at every corner, the great contest being, who shall first deliver the cards. A man in good condition will, in the course of the morning's round, *pousser* four score or one hundred billets in these visits. A novel and ingenious mode of acknowledging these calls was adopted this year (1828) by a citizen who, being encumbered with flesh and keeping no carriage, found his physical powers unequal to the task of leaving his name at the doors of his numerous friends in person. He therefore stationed his servant in his hall with a plentiful supply of visiting cards, to be exchanged for those left for him."—[Gordon's Belgium.]

Imposition of Servants.—"The wages of a cook *à la bourgeoise* are ten or twelve Napoleons; a house maid, eight; a footman, from fifteen to twenty. Belgian domestics, though not so expert as English in doing the work of a house, and perhaps more capricious in their tempers, are less dainty in their food, and consequently less expensive; but they contract so many bad habits in the service of the English, that they find some difficulty in again getting placed with their countrymen, and this they tell you with great coolness, and make their demands accordingly. The cook is so confident that you will submit to be fleeced, that, in engaging with you, she will say, 'Mais, madame, combien pour-vez-vous me payer?' which, Anglicised, means, 'To what extent may I impose on you?'"—[Gordon's Belgium.]

Napoleon had a French cook, who undertook to dress a fowl for his Imperial Majesty's dinner, in a different manner every day, for a whole year; he fulfilled his promise, and succeeded in gratifying the Emperor's palate in 365 different ways, every one of which was perfectly unexceptionable.

It is stated in a Havre paper, that Dr. Antomarchi, the medical attendant of Napoleon at St. Helena, and who closed the eyes of that great man, after death had closed his career in his island prison, is about to embark for the United States; where he is to act in the capacity of household Physician to Joseph Bonaparte.

East India Prices.—Cheese brings 87 1/2 cents a pound in India. Ham the same. Raspberry jam readily sells for \$5 33 each jar. Salad oil brings \$2 66 a pint. A jar of pickles containing two pounds often sells for \$15 00. Harness leather is very scarce and produces immense profits.

The rate of postage on foreign papers has been reduced in England to a moderate sum, so that American newspapers may now be sent there without incurring an unreasonable charge.

A small vessel, called the *Kaliopapa*, named after the King of Otaheite, has brought up to Sydney, 55 tons of sugar made from the sugar cane grown in that Island. It is said to be very fine, and equal in quality to the Mauritius sugar, though not so large in the grain.

The advices from Naples continue to speak of the ravage of the recent eruption. The habitations of 180 families have been swallowed up, and 800 individuals bereft of an asylum. One of the principal dangers during the eruption was, that the inflammable matter would reach the magazine of powder, the explosion of which would have produced incalculable mischief.

General Mina, late an unhappy exile in England, has been reinstated by the Spanish government in his former honors.

The fisheries in the Gulf of St. Lawrence have almost entirely failed.

The Pimento Tree.—One of the most valuable trees of Jamaica is the pimento, which flourishes spontaneously and in great abundance on the north side of the island; its numerous white blossoms, mixing with the dark green foliage, and with the slightest breeze diffusing around the most delicious fragrance, give a beauty and charm to nature rarely equalled, and of which he who has not visited the shady arbors and perfumed groves of the tropics can have little conception. This lovely tree, the very

leaf of which, bruised, emits a fine aromatic odour, nearly as powerful as that of the spice itself, has been known to grow to the height of from thirty to forty feet, exceedingly straight, and having for its base the spinous ridge of a rock, eight or ten feet above the surface of the hill or mountain. A single tree will produce 150 of the raw, or 100 pounds of the dried fruit. The indigenous forest and even exotic trees of Jamaica, grow to a prodigious height; the palmetto royal is frequently found one hundred and forty feet; the vast trunks of the *osiba*, (wild cotton tree) and fig trees, often measure ninety feet from the base to the limbs, and the trunk of the former, when hollowed out, has formed out a boat capable of holding one hundred persons. There is a great variety of timber for agricultural and household purposes, and some exquisitely beautiful cabinet woods.—[Montgomery Martin's History, Volume 2.]

It is related in Bulwer's "France" that at the battle of Jemappe, Dumourier had for his aide-de-camp, two of the most beautiful, the most accomplished young women in the society of the time.—Equally chaste and warlike, these modern Camillas felt a veneration for the profession of arms—they delighted in the smoke of the cannon and the sound of the trumpet. Often a general told me, in the most desperate crisis of the battle, he has heard their slender voices reproaching flight and urging to the charge: "On allez-vous, soldats? ce n'est pas la pennemi! En avant! suivez!" and you might have seen their waving plumes and amazonian garb amidst the thickest of the fire.

TO A LADY, GARDENING.—By THOMAS MOORE.

O could we do with this world of ours
As thou dost with thy garden bowers,
Rejoice the weeds and keep the flowers,
What a heaven on earth we'd make it!
So bright a dwelling should be our own;
So warranted free from sigh or frown,
That angels soon would be coming down,
By the week or month to take it.
Like those gay flies that wing through air;
And in themselves a lustre bear
A stock of light, still ready there.
Whenever they wish to use it.
So in this world I'd make for thee,
Our hearts should all like fire-flies be,
And the flash of wit or poetry
Break forth whenever we choose it.
While every joy that glads our sphere
Hath still some shadow hovering near,
In this new world of ours my dear,
Such shadows will all be omitted:
Unless they're like that graceful one,
Which, when thou'rt dancing in the sun,
Still near thee, leaves a charm upon
Each spot where it hath flitted!

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wish it. Its size is 34 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y., by
D. K. MINOR & J. E. CHALLIS.

UTICA AND SCHENECTADY RAILROAD COMPANY.

Call for Second Instalment on Stock.
THE Stockholders in the Utica and Schenectady Railroad Company are requested to pay on or before the twentieth day of December next, the sum of Three Dollars on each Share of Stock in the Company held by them respectively under the penalty (provided by law in case of non-payment) of the forfeiture of all previous payments made thereon.

Stockholders residing in the city of New York, or within said State and south of the counties of Columbia, Greene and Delaware, are requested to make said payments to the Cashier of the Phenix Bank, at the said Bank in the city of New York; and all other Stockholders in said Company are requested to make said payments to the Treasurer of said Company at the Albany City Bank or at the Commercial Bank, in the city of Albany; but any Stockholder residing west of the counties of Albany, Schenectady or Saratoga may make such payments by depositing the same to the credit of the said Treasurer in the Ontario Branch Bank, in the city of Utica, or in the Herkimer County Bank, at Little Falls, or in the Montgomery County Bank, at Johnstown, provided a certificate of such deposit (with the name of the Stockholder by or for whom such deposit is made) be forwarded to said Treasurer, so as to be received by him on or before the 25th day of December next.

Albany, November 12, 1834. By order,
GIDEON HAWLEY,
Treasurer of the Utica and Schenectady Railroad Company.

PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

Railroad Spikes of every description required, made at the Albany Spikes Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use.

Ship and Boat Spikes made full size under the head, so as not to admit water.

Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y.

sept 12-37

MECHANICS MAGAZINE.
THE NUMBER FOR OCTOBER 31, will be ready for delivery to subscribers on Monday next. It contains numerous articles, and a concise account of the FAIR of the AMERICAN INSTITUTE held at NIBLOS' GARDENS, illustrated with numerous engravings.

MECHANICS and OTHERS who feel interested in endeavoring to abolish the abominable "STRATA PRISON MONOPOLY" are requested to forward to the Editor such facts as come within their knowledge, and they will be published if authenticated.

The Mechanics Magazine and Register of Inventions and Improvements is published by the Proprietors, D. K. MINOR & J. E. CHALLIS, at No. 35 Wall-street, New York: in weekly sheets of 16 pages, at 64 cents—in monthly parts of 64 pages, at 34 cents—in volumes of 384 pages, in cloth boards, at \$1.75—or at \$3 per annum, in advance.—JOHN KIMBART, (formerly proprietor of the London Mechanics Magazine,) Editor.

AGENTS FOR NEW PUBLICATIONS.
HENRY G. WOODHULL, of Wheatland, Monroe county, New York, is agent for the following Publications:
The New York American Daily, at \$10.00—Tri-Weekly, at \$5.00—Semi-Weekly, at \$4.00 in advance.
The American Railroad Journal, Weekly, at \$3.00 per annum.

The Mechanics Magazine, two volumes a year, at \$3.00 per annum.
The Quarterly Journal of Agriculture and Mechanics, at \$5.00 per annum, or \$1.35 per number.

The Family Magazine, 416 pages a year, at \$1.50 in advance.
The Monthly Repository and Library of Entertaining Knowledge, of 36 pages a month, at \$1.00 in advance, now in the 5th volume, bound volumes \$1.25.
The Ladies' Companion, of 54 pages a month, at \$3.00 per annum, in advance.

The Rochester Gen., at \$1.50 in advance.
All Communications addressed to me, at Wheatland, Monroe county, will be promptly attended to. September 19, 1834.

TO RAILROAD COMPANIES.

The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few sets wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. a3

SURVEYORS' INSTRUMENTS.

Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane. J31 6t

NOTICE TO MANUFACTURERS.

SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring farther information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 URM&F

PATENT RAILROAD, SHIP AND BOAT SPIKES.

The Troy Iron and Nail Factory keep constantly for sale a very extensive assortment of Wrought Spikes and Nails from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

HENRY BURDEN, Agent.

Tro N. Y. July, 1831.

Spikes are kept for sale, at factory prices, by I. & J. Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. L. Brower, 233 Water street, New-York; A. M. Jones, Philadelphia; T. Janvier, Baltimore; Degrand & Smith, Boston.

F. S.—Railroad Companies would do well to forward their orders as early as practical, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand for his Spikes.

J23 1am

H. BURDEN.

STEPHENSON.

Builder of a superior style of Passenger Cars for Railroad
No. 264 Elizabeth street, near Bleecker street,
New-York.

RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlem Railroad, now in operation. J25 1f

RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS. Also, Flange Tires turned complete. J8

ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18



INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

EWING & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit Levels, and Surveyors' Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte.—As you have asked me to give my opinion of the merits of those Instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming acquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprise so well merits, I remain, yours, &c.

B. H. LATROBE,

Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same.

LOCOMOTIVE ENGINES.

THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1/2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal-pine-wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company, WILLIAM NORRIS, Secretary.

December 2d, 1833.

For further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

	Flat Bars in length of 14 to 15 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.
Ninety-five tons of 1 inch by 1/2 inch,	
200 do. 1 1/2 do. 1/2 do.	
40 do. 1 1/2 do. 1/2 do.	
800 do. 2 do. 1/2 do.	
500 do. 2 1/2 do. 1/2 do.	
soon expected.	

3250 do. of Edge Rail of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2 1/2, 3, 3 1/2, 4, and 4 1/2 inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON.

9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

SURVEYING AND ENGINEERING INSTRUMENTS.

The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the Instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sight, leaves the engineer scarcely anything to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to later angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,

JAMES P. STABLER, Superintendent of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors.

E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.

Germantown and Norristown Railroad,